Inaugural Address

UPON

DENTAL EDUCATION,

Delivered before the British Dental Association at the Examination Hall of the Royal Colleges of Physicians (London) and Surgeons (England), Victoria Embankment, on Aug. 12th, 1896,

BY FREDERICK CANTON, L.R.C.P. LOND., M.R.C.S., L.D.S. ENG., L.S.A.

GENTLEMEN,—In accepting the very honourable position of President of your Association I can assure you I have not done so with any feeling of being "the right man in the right place," but partly because I felt it would be ungracious on my part to refuse an honour so kindly bestowed and partly because my interest has been, and is, thoroughly in accord with the good objects of this Association and if by taking my present position I can in any way help forward those objects I shall be amply rewarded for any anxiety or trouble the position may cause me. I have the honour to welcome you to London in the name not only of the Metropolitan Branch, but of all London members of the Association.

Since the meeting of the International Medical Congress in 1881, when the late Sir John Tomes read a paper on "The Study of Dental Surgery, and the means thereto" we have had a good many other papers written, read, and discussed on the subject of dental education, and, judging by these papers, we are still far from unanimous in our views on this question. That immense good has resulted from this subject having been brought forward on so many occasions I am quite convinced, and that it will from time to time be brought forward and discussed I am certain must be the case if we are to keep pace with the times. That we shall ever all be unanimous in our views is more than can be hoped for. In referring to the subject of dental education I know I am treading on delicate ground, but the subject is such an important one that the more it is ventilated the better it will be for the public and for the profession. It is difficult to foresee or foretell what may be the ultimate development of our calling, but we cannot be wrong in attempting to adjust the curriculum of the dental student so as to ensure his becoming as competent a practitioner as possible, and in a young profession like our own it must take time to gradually perfect the course of education. We shall not arrive at perfection by any sudden advance; all such questions as that of education should begin by being carefully thought out and discussed. It is only by divesting our minds of all prejudice and modifying our prepossessions that we can expect to make true progress. We must ever keep in view the advancing requirements of dental practice—not discarding anything that is old because of its age or rashly accepting that which is new because of its novelty. Our profession is, perhaps, a little more difficult to deal with than some others, as we have a mechanical and a surgical side as well as a more purely scientific one. The combination is peculiar and the line can hardly be drawn, and if drawn at all must be of a very indeterminate character; but as for purposes of definition we in physiology talk of the animal and vegetable kingdom, so do we talk of surgical and mechanical dentistry, but the teacher of either subject knows not where to stop or where to begin or how to keep a straight course if he attempts to divorce them. One of the objects of this Association should be, I think, to see that neither one side nor the other preponderates—that is to say, we must guard against any attempt at impairing our professional training and utility by allowing the mechanical side of our training unduly to outweigh the other, and at the same time we must be careful that our ideas are not dominated by the purely surgical aspect of our calling, for if we do, the public as well as ourselves will be the sufferers. To hit this happy medium is not an easy matter. Considering that after our students get into practice very few really construct their own appliances, I think this mechanical portion of our curriculum, compared to the other side, claims rather more attention than it might. Practically our curriculum is a five years' one, and I should like to see it declared as such, and the suggestion I would throw out is that the third year of the three devoted to dental mechanics should be devoted to hospital work with a view to maturing and utilising the knowledge and skill acquired in the workroom, by not only making artificial cases and other appliances, but by executing the necessary preliminary work in the mouth, and then by carrying on the cases through their most difficult and most important stage—viz., adjusting them to their ultimate purpose. In this way one of those arbitrary but unsatisfactory divisions of our profession would be bridged over gradually and even unconsciously. A certain number of cases should be required to be done and during this period chemistry, dental metallurgy, and materia medica should also be studied, leaving two years for the operative treatment of the mouth and for dental surgery attendance at the general hospital. The operative treatment of the teeth is certainly the most important part of the work we are called upon to do, but, as at present constituted, the curriculum seems to me to tend more to the mechanical side. It must be borne in mind that we do not propose to turn out first-class mechanics only, but operative dental surgeons. If we were training our successors as mechanics only, then five years, or even seven years, would not be too long a time to serve in the work-room; but, as I have said before, only a very small proportion of our profession do their own mechanical work in after life. But that every dentist must know how, and be able, to do the ordinary work required in our work-rooms is absolutely essential to enable him to become a good practitioner is an obvious fact, and for that reason the examination in mechanical dentistry has been established with most excellent results, especially as to the improvement in the work now done at this examination, a fact which undoubtedly justifies the view expressed by Mr. Charles Tomes that: "there appears to be tangible evidence that the average candidate prepares himself with a strict regard to the requirements of the examination and no more, and that, within reasonable limits, increased requirements do not lead to wholesale rejections but are very speedily followed by an improved standard of capacity in the candidates." Two very important subjects of our training might, I think, with very real advantage be improved on, and those are dental histology and dental materia medica. The first especially should have a separate and well-organised department to itself in all our schools and should include the elements of bacteriology. The wider training we can give our successors without deteriorating the absolute requirements for practice the more certainly will they develop any latent talent which they may possess for investigation and discovery and so promote the scientific progress of our profession and serve their patients in a double capacity. To show that in advocating what I have I am not making any very great extra demand on the time of the student at present taken by him, Mr. Hallett, of the Examination Hall, has very kindly taken out a few statistics for me as to the time taken to pass by the students of the present day, with the result that during the last nine years 205 candidates were admitted to examination in four years and under five years, 145 in five years and under six, 90 in six years and under seven, 24 in seven years and under eight, and 24 took over eight. You will see, therefore, that 283 candidates have taken five years and upwards out of the total of 488.

The above statistics have been taken by Mr. Hallett from the dates of the first appearance of the candidate before the examining board and not from the dates of his obtaining the diploma, so that they show truly the length of study and do not take into account the extra periods spent owing to rejections. My own opinion is that by having a declared five years' curriculum instead of four and by having two examinations for the Dental Diploma it would not be putting any extra strain on the student, but, on the contrary, it would give him the extra time which is required by the average student and enable him to pass with greater ease.

Another side of this question of education which is much more difficult to treat of is that of the education of the public to enable them to discriminate between the educated and competent practitioner and the opposite. I must admit that it does seem to me in some cases not easy for the public to ascertain this difference. It is true there is such a publication as the Dentist's Register, but this would not, I am afraid, give them all the information they require, even if the publication of the book were known to them; the only really valuable information it would give them is that if the person who has been attending them is not on this register they cannot be made to pay his fee. This information, however, is not to be found in the register proper, but in the Act of Parliament which is

appended to it, and, moreover, I think that it is of questionable morality, for in many instances the patient is served quite up to the value of his expenditure, and, as two blacks cannot make a white, the refusal to pay for services rendered is only a further contribution to an illegal transaction; but it does not prohibit advertising, which is the great misleader of the public, for it not only flatters their ignorance but appeals to their cupidity. The Stock Exchange puts an advertisement in the papers daily, I believe, stating the fact that no member is allowed to advertise, and although the result is not as effective as one could wish, still, it has been suggested that possibly it might assist the public a little if we made a similar statement—viz., "that no member of the British Dental Association is allowed to advertise." This, however, would entail some alterations in our by-laws but as these changes would be of a utilitarian rather than of a sentimental character, they might repay the necessary trouble by being profitable. This might enable the public to make a few more inquiries before consulting a dental practitioner. There are, of course we know, many respectable practitioners who are not members of this Association, and it is much to be regretted that such is the case. I cannot help feeling strongly that it is the duty of every professional man to do his utmost to assist in the elevation and cultivation of that profession to which he belongs.

I have already alluded to the assistance afforded to the public in its efforts to discriminate between the legal and illegal practitioner, and if we may judge by the letters which have appeared in our own Journal and in the medical journals the matter to some minds appears an easy one—in other words, they consider that the law can be made to take the place of individual intelligence and become almost automatic in its action. But while this never can be I think I am right in saying that the Dentists Act comes nearer to meeting the necessities of the public and the profession than any other Act hitherto passed with this object. It has been the aim of the executive of our association to secure if possible any advantages which may arise in any change of the laws affecting the exercise of our profession. But the changes which we have at present to watch are of a kind which tend in their operation to destroy advantages already acquired and to obliterate those distinctions which are so essential to the public at large. The Companies Act as at present in force enables an individual to shelter himself under its ægis, and as a company to do that which in a private individual would bring him under the power of the law. In the contemplated legislation of the future it seems as if this anomaly were to be perpetuated, and it is to the prevention of such an iniquity that the efforts of our executive are at present directed. The extraordinary case of Regina *v.* Priestley, as noticed in our Journal of June 15th, exhibited the inefficiency of the law in protecting the public from unskilled and unregistered practitioners in such an appalling manner as to call forth an article from the *Times*, in which the need for better legislation in reference to the practice of medicine and dentistry was powerfully urged. But, whether or no such legislation will ever become urgent from a public point of view, I think we have good reason to protest against the present form of the law, which imposes upon the professional man a long and expensive course of education and yet leaves him on the same level as such a pretender as Priestley. Surely, if education and examination are imposed upon professional men for the protection of the public, it is only a rational sequence to expect that this education, once achieved, shall also be protected from the dishonest and dangerous assumptions of the ignorant and incompetent.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND.—At the July examinations the following candidates passed the Practical Examination for the Associateship:—Meredith Wynter Blyth, B.A. Cantab., B.Sc. Lond.; James Wallace Donald; George Cecil Fry, B.Sc. Vict.; William Marrs Hooton, B.Sc. Vict.; Alexander Henry Mitchell Muter; Ernest Lawrence Peck, B.Sc. Vict.; Robert Hutchison Turnbull; Harry Metcalfe Smith (for Fellowship); and James Robertson Swan. Intermediate Examination: Frank Collingridge, B.Sc. Lond.; John Imrie; and Albert Edward Parkes. Final Examination for the Associateship: William Augustus Caspari, B.Sc. Vict.; Charles Edward Harrison, B.A. Cantab.; William Trantom, B.Sc. Vict.; Charles Mills; and Percy George Jackson. Special Examination in General Agricultural Chemistry for Fellowship: Vincent Edwards.

ON CEREBELLAR SOFTENING IN INFANTS, WITH CLINICAL AND PATHOLOGICAL DETAILS OF A CASE.

BY VINCENT DICKINSON, M.D., M.R.C.P. LOND.,
HONORARY PHYSICIAN TO THE SUTHERLAND-STREET HOME OF COMPASSION;
AND
S. RUSSELL WELLS, M.D., B.Sc., M.R.C.P. LOND.,
MEDICAL REGISTRAR TO ST. GEORGE'S HOSPITAL.

CASES of cerebellar softening are uncommon. Gowers[1] states that the softening is always less extensive than the area of distribution of the affected vessel on account of the freedom of the anastomoses and that it is more common in the region supplied by the posterior cerebral artery. He also states that occasionally an isolated area of softening is found in the middle of one hemisphere without any symptoms during life that could be ascribed to it. As a case has recently come under our notice, we think it of sufficient interest to put on record, and to add certain considerations on this affection which have occurred to us.

The patient, a male, was born on June 19th, 1894. The father was in good health, and there was no history of syphilis. There was tubercle in the mother's family. The child was delivered by breech presentation at full time; the labour was rapid, and nothing abnormal was noticed about the cord or placenta. The child was not nursed and was weakly, but nothing attracted attention until two days after birth, when he began to have screaming fits. Five days after birth he is stated to have had five successive attacks of unconsciousness. These never recurred, but the child remained weakly, had frequent screaming fits, was never seen to smile or look bright or play as other infants, the eyes were lustreless, and he did not seem to take notice of objects. In September, 1894, the case came under the notice of Dr. Ridley of Woking, who writes: "I found the child in a very curious state—in fact, I did not expect it to live. It only weighed eight pounds (8lb.) and was a most sad object and had all the appearance of a syphilitic child; it had screaming fits, slight attacks of convulsions, profuse sweating of the head, and pyrexia—one day 103° F., next day normal, and no cause for this. There never was any diarrhœa or vomiting and the child took food well, but the wasting was so great that I put him on Mellin's food, cream, and bromide, the result being a steady increase of weight; but the child took no notice of anything, was highly irritable, screaming and fighting with its clothes till it broke all its nails. There was no evidence of rickets or scurvy. My own opinion was that I had to do with a highly neurotic child, possibly tuberculous, with defective cerebral development. The child is liable to eczema at times." Subsequently he was seen by Dr. J. A. Coutts on account of blindness and attacks like those of laryngismus. He did not consider the child was entirely blind and the ophthalmoscope revealed nothing definite. The attacks were described as sometimes those of a prolonged "faint," at others like those of severe laryngismus stridulus. The knee-jerks were rather easily elicited for a child so young. There seemed to be no peripheral cause for the attacks. His condition seems to have improved after this; he became more quiet, took his food well, and showed no evidence of any gastro-intestinal disturbance.

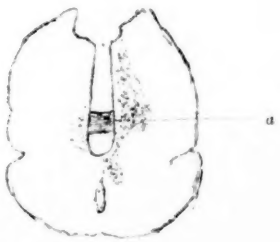
When the child first came under our notice, on Feb. 10th, 1895, he was emaciated and very pallid, lying with his eyes open or with but slight drooping of the lids, the eyes moved laterally slowly, but never seemed to fix any object, nor could his attention be excited to do this. A light moved about before the eyes was not followed, but the pupils, which were small, contracted very slightly under its influence. The child seemed to be sensitive in a moderate degree to sound. From time to time with a cry of pain the back was arched and the head thrown back, but there was no marked rigidity of the upper part of the erectores spinæ. Examination of the chest revealed nothing abnormal. There seemed to be no paralysis or rigidity of the limbs. The child took food well and the evacuations were healthy. The temperature was 104° and the pulse 200. On Feb. 14th he was in much the same state. Dr. Cheadle saw him in consultation, and suggested the condition might be recurrent influenza,

[1] Diseases of the Nervous System.

which was present at the time in epidemic form. Two grains of hydrochlorate of quinine were ordered every four hours with brandy, but this did not reduce the temperature below 99·6°, which was reached on one occasion only. On Feb. 16th a long convulsive attack occurred affecting the head, arms, and legs, the temperature rising to 106·4°. The state of pyrexia and gradual enfeeblement, but without convulsions, continued till death. On Feb. 28th several convulsive attacks occurred; the temperature fell to 99·4°. Death occurred on March 1st.

Necropsy.—All the organs were found to be normal until the skull was opened, when the brain, which was carefully examined, presented the following condition. The greater part of the cerebellum was softened and had the consistence of thick cream and was of a dirty white colour. The only parts of the cerebellum that were healthy in texture and

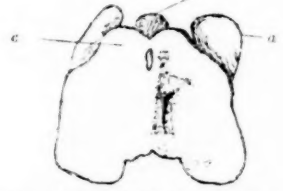
FIG. 1.



Section slightly posterior to middle commissure showing (*a*) anterior limit of softening.

appearance were the flocculus and tonsil on either side, the inferior vermiform process, a small part of the digastric lobe on the right, and on the left most of the lower surface of the lateral hemisphere. From this it will be seen that nearly all of the right side of the cerebellum was softened and all the upper part of the left. In the pons there was an area of softening on the right side below, which was strictly limited by the medium septum, destroying about half the

FIG. 2.



Vertical section through pons at the level of (*a*) anterior corpora quadrigemina; (*b*) pineal gland; (*c*) optic thalamus.

thickness of the pons on that side. This softening extended upwards, and by a vertical section at the level of the corpora quadrigemina it was seen that while these bodies themselves were healthy there was an area of softening in the pons at this level on the right side (*vide* Figs. 2 and 3). The upper limit of the lesion extended as far as the optic thalamus, which was softened on its inner aspect on the right to about midway between the posterior and middle commissure (Fig. 1). The rest of the brain with the medulla was normal. Microscopically the usual appearances of white softening were found. No tubercle, new growth, or active inflammatory change could be discovered. On examining the vessels at the base a block was found in the basilar artery at its bifurcation into the posterior cerebrals, and the right superior cerebellar was obliterated, forming a mere cord, while the left appeared to be pervious although the part of the basilar from which it arose was filled with clot. The basilar artery was carefully removed and longitudinal microscopical sections made of it with the contained clot. On microscopical examination at the bifurcation an old organised blood clot was found. This mass, both from its position and the way in which it was wedged into the two posterior cerebrals, strongly suggested an embolism, and the fact that it was organised and certainly of some age lent support to this view. Extending from the ends of the plug for a short distance into each posterior cerebral was a much more recent clot, and a similar clot of recent origin extended backwards to about the middle of the basilar artery. Obviously here we had to deal with first an embolism of the basilar occurring at its bifurcation and then secondary thromboses leading to obstruction of the posterior cerebral and superior cerebellar arteries and, consequently, softening of the superior parts of the cerebellum and the area in the pons. Probably the reason why the cerebellum was more softened on the right side was because the right superior cerebellar was completely obliterated, while the left, though blocked at its origin from the basilar, was supplied with blood by some anastomoses

FIG. 3.

Vertical section through pons at the level of (*a*) the posterior corpora quadrigemina.

which happened to be more free in this particular case on that side.

This case presents unusual interest, not only on account of the rarity of cerebellar softening, but the clinical aspect, which afforded no clue to the presence of a well-defined gross lesion in the brain. A point of still greater interest arises in the possibility of the embolism being due to a clot which reached the brain from the umbilical cord *viâ* the ductus venosus and foramen ovale. It will be noted that the first symptons occurred two days after birth. Two cases of red softening of the cerebellum reported in the *Jahrbuch für Kinderkrankheiten*, vol. xi., p. 41, are of extreme interest as showing how difficult diagnosis may be in these cases. The first was that of an emaciated, anæmic, rachitic girl aged five years, admitted into hospital with debility, cough, and constipation. There had been slight febrile disturbance; the main symptoms were debility, dilated pupils, headache, giddiness, and vomiting. An attack of pleuro-pneumonia with diarrhœa supervened, which left the patient very restless, semi-delirious, the head bent forward, the face pale, but flushing at times, and pupils widely dilated. On sitting up there was a tendency to fall to the right. Consciousness was gradually lost and convulsions preceded death. Post mortem the right lobe of the cerebellum was found to be enlarged, of a dirty red colour and soft consistency. The pia mater was adherent. Here a cerebral lesion was indicated by the giddiness, headache, dilated pupils and vomiting, with obstinate constipation, and was confirmed by the unconsciousness and convulsions. Nothing pointed to the cerebellum as the seat of the lesion. In the second case, a child aged six years, vomiting with clonic facial spasm supervened on an attack of pneumonia. Unconsciousness, facial paralysis, and death ensued. At the necropsy besides distension of the lateral ventricles and an exudation at the base of the brain involving the seventh pair of nerves, the right lobus quadrangularis was transformed into an area of red softening. Here all the symptoms were accounted for by the exudation at the base, the cerebellar lesion apparently causing no symptoms. D'Astros has studied the subject of softening due to obliteration of the cerebellar arteries,[2] and arrives at the following conclusions:—Softening of the cerebellum is rare, since thrombosis in the cerebellar arteries is of infrequent occurrence and embolism very exceptional, and in addition there is free anastomosis between the posterior inferior cerebellar artery and the vertebral, and between the superior cerebellar with the posterior cerebral. These arterial relations explain the association of areas of softening in the

[2] D'Astros, Marseille Médicale, 1893. p. 244.

bulb and cerebral peduncle with similar lesions of the cerebellum and consequently masking of true cerebellar symptoms by bulbar ones. He gives illustrative cases, but not in children.

The symptoms that have been ascribed to disease of the cerebellum are various, but among those of most constant occurrence must be mentioned headache, vomiting, "compelled" movements, and a kind of ataxia called cerebellar titubation.[3] In some instances, especially in tumours, these symptoms have been very marked and characteristic, but, on the other hand, cases have occurred where a definite cerebellar lesion existed without any symptoms leading to a suspicion of its existence. In our case the existence of headache was doubtful and vomiting was practically absent. This latter symptom, which may occur in hæmorrhage into any part of the brain, was not considered pathognomonic of cerebellar lesions by Nothnagel, who noted that it was frequently wanting under such circumstances. In so young a child it was not possible to determine if any incoördination was present, and with regard to this symptom it may be mentioned that it is doubtful whether disturbance of coördination without paralysis has ever been seen in cases of simple lesions of long standing which do not exert mechanical pressure on surrounding parts. Similarly, "compelled" movements and paralysis are to be referred to injury of the crura cerebelli rather than to the affection of the cerebellum itself.[4] The fact of hæmorrhagic cysts of considerable size having been found in this region in cases where no symptoms have remained after the immediate effects of the injury have passed off proves that motor paralysis is not a necessary symptom of cerebellar disease.[5] Levers and Ollivier (*Archive générales*, 1862) state that the eye alone of all the organs of sense is affected in disease of the cerebellum, and that strabismus, pupillary changes, and gradually increasing amblyopia and amaurosis result. These observers consider that headache, irregular movements of the limbs and ocular muscles, with amaurosis constitute the only intrinsic symptoms attributable to cerebellar disease. Bilateral mydriasis has been observed several times in abscess of the cerebellum.[6] The amaurosis has generally been explained by implication of the neighbouring corpora quadrigemina, but, as will be seen from the illustration, they were not directly affected in our case, though possibly there may have been pressure from surrounding exudation. But Louget attributes it to the connexion of the fifth pair with the middle cerebellar peduncle, and both Vulpian[7] and Brown-Séquard[8] refuse to admit pressure on the corpora quadrigemina as a cause of the blindness and consider it due to secondary changes in the brain or optic nerves or to sympathetic derangement analogous to that of vomiting in cerebral tumours. Unilateral blindness appears to be very rare. In our case the high temperature, which was so marked, and the respiratory spasms were obviously due to the implication of thermal and respiratory centres in the pons and medulla. The only cranial symptoms were amaurosis and possibly headache, as indicated by the screaming fits. These two were insufficient alone to justify a focal diagnosis, and while the high temperature and laryngeal spasm might have suggested a bulbar lesion there was nothing to indicate its possible nature.

The question now arises, Where was the embolus formed since no inflammatory cardiac lesion was found to account for it? Nothnagel[9] says that in rare instances particles crumble off from a blood-clot which has become developed within the heart or pulmonary veins independently of any local inflammatory process and are carried away as emboli, the thrombosis being due to diminished efficiency of the heart's action produced by general diseases with marked cachectic diathesis. Emboli originating in this way have been found in connexion with carcinoma, tuberculosis, and empyema, and it is possible that the same may have happened in this case as a result of influenza occurring in a weakly infant. The same writer states that "autochthonous" thrombi have occasionally been observed in the case of cachectic persons where there was not the least appearance of alteration of the walls of the vessels or any condition which might give rise to embolism. This explanation might hold good in the present case were not the appearances so characteristic of an embolus with its secondary thrombus.

In seeking an explanation in the possibility of the migration of a blood-clot from the placenta or cord *viâ* a patent foramen ovale we have carefully searched for analogous cases in the post-mortem records of St. George's Hospital, the Victoria Hospital for Children, and the East London Hospital for Children, and Dr. Colman has kindly informed us that there are no records of any cases of cerebral softening in young children at the Hospital for Sick Children, Great Ormond-street. We find only two cases in any way similar from the Victoria Hospital, which we are kindly permitted to make use of by Dr. Walter Carr. The first was aged two years, with chronic ill-health from bronchiectasis. In the last illness there was no hemiplegia or any cerebral symptoms. The necropsy showed blocking of the right posterior cerebral artery and softening round the lateral ventricle. The heart was healthy. This was probable thrombosis of the artery in a case of chronic bronchiectasis. The second was aged seven weeks. It was a case of marasmus. The necropsy showed softening round the lateral ventricles, but no blocking of the vessels. There were some small granulations on the mitral valve. This was probably embolism. It does not appear that either of these cases is precisely similar to that which we have recorded.

With regard to a patent foramen ovale Taylor states that though in general he found it closed after the establishment of respiration it was repeatedly open in children who had survived birth several hours. Billard gave the second and third days as the date of closure and Orfila[10] stated that the peculiar parts of fœtal circulation were rarely obliterated before the eighth or tenth day after birth, the foramen ovale closing last. According to Elsässen[11] these vessels remain open some time after birth, but it is not possible to determine accurately by days the period of their closure, complete closure taking place within the first six weeks after birth. And we find on searching the post-mortem records at St. George's Hospital that the foramen ovale in some cases remains patent much longer than is generally supposed, it not being an infrequent occurrence to find it open as late as two months in children who showed no symptoms of congenital heart disease during life. So far as we know, this theory has never been advanced as an explanation of cerebral softening in young infants; but since it is probable that after the separation of the umbilical cord a clot forms in that part of the umbilical vein which will eventually become the round ligament of the liver, it is at any rate possible that such a clot may become dislodged and pass *viâ* a patent foramen ovale direct to the brain. Without laying undue stress on this idea we offer it as a suggestion that may explain some obscure cases in early infancy.

[3] Vide Herard, Union Médicale, 1890.
[4] Nouat: Comptes Rendus, 1891.
[5] Nothnagel: Ziemssen's Encyclopädie, xii., 187.
[6] Hugenin: Ibid.
[7] Bulletins de la Société Anatomique, 1855, p. 22.
[8] Journal de Physiologie, 1861.
[9] Nothnagel: Ziemssen's Encyclopädie.

[10] Médecine Légale, 1848, ii., 210.
[11] Medical Times and Gazette, 1853, p. 530.

ANTI-DIPHTHERITIC SERUM AND ITS PREPARATION.[1]

BY T. J. BOKENHAM, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE RESEARCH SCHOLAR, BRITISH MEDICAL ASSOCIATION.

THE subject of Sero-Therapeutics has already been dealt with in such detail in the medical journals that some excuse is perhaps needed to justify one in bringing it before the Section of Pathology at this meeting of the British Medical Association. The journals have of course been full of the results obtained by sero-therapeutics in the treatment of diphtheria, and they have also from time to time contained accounts more or less detailed of the mode of preparation, testing, and issuing the serum for use from the various laboratories in England and abroad. During the past two years, however, I have given a great part of my time to the preparation of anti-diphtheritic serum and to studying the most suitable means for securing its uniform activity. During that time I have received very numerous letters from practitioners asking for all sorts of details as to the method of preparation; how uniform potency is secured, how the tests are carried out in my own laboratories, and how the

[1] Read in the Section of Pathology at the annual meeting of the British Medical Association held at Carlisle, 1896.

serum should be used in actual practice. These showed me that something was needed in addition to the descriptions which had appeared from time to time; and I thought the present meeting afforded a very excellent opportunity for giving as briefly as possible a practical demonstration of the whole of the processes employed in preparing anti-diphtheritic serum, commencing from the selection of the diphtheria bacillus destined to produce the toxin needed for immunisation, and finishing with a description of the technique of the method by which the serum is put into bottles for use.

The Diphtheria Bacillus to be Selected.

Roux and Behring found that the best method of preparing a strong toxin was to cultivate the bacillus in a free current of oxygen, and Roux finally employed, and employs still, very wide, flat flasks through which a current of air can be continuously drawn by means of a suction pump. These flasks are capable of holding a large quantity of bouillon in a layer of small depth. Roux inoculates these flasks and allows the bacilli to grow at a temperature of 37° C. for three weeks or a month, possibly longer, with a constant current of air passing over the surface. The method of Roux has been very widely adopted and is still employed in most laboratories. In the course of last year, however, I paid a visit to the Institut Sero-Therapique at Brussels and studied the methods employed by my friend, Dr. Funck, the director of that institute. His results convinced me that it was by no means necessary to employ the complicated method of aeration devised by Roux, and that by using a very virulent bacillus a toxin could be obtained quite strong enough for ordinary purposes—indeed, many times stronger than the Behring "normal toxin." Since that time I have therefore abandoned the method of Roux and adopted one similar to that which I saw in action at Brussels.

It is a matter of great importance to observe the mode of growth of the bacillus itself. In order to obtain an active toxin it is desirable that the bacillary growth should take place chiefly in the form of a dense white pellicle on the surface of the bouillon. The bacilli as they multiply are then brought into contact with a free supply of oxygen and form their toxic products under the best possible conditions. It is also most important to keep the flask undisturbed from the moment that the pellicle has commenced to form, in order to avoid breaking up the film of bacilli. After about a fortnight or three weeks of incubation at 37° C. the culture may be filtered through a sterile porcelain filter, and if the process has been carried out with proper care and a sufficiently virulent bacillus employed it will be found that the toxin yielded is of such a strength that a dose of from 1 to .5 centigrammes is fatal (within forty-eight hours) to small guinea-pigs. It is the experience both of Dr. Funck and myself that unless a good firm pellicle is formed the resulting toxin is seldom satisfactory in power.

Before using such toxin for immunising horses one should first determine its activity. This is ascertained by tests carried out on small guinea-pigs. I have not been satisfied with any toxin for immunising purposes unless the lethal dose is at the most five centigrammes, such a dose producing death in a 300 gramme guinea-pig within about forty-eight hours. Such a toxin I have employed constantly for nearly twelve months, and it will be observed that it is a good deal more powerful than the toxin adopted by Behring as a standard. In using this powerful poison the selection of the breed of horses to be subjected to the immunising process is of great importance. That was brought to my notice by a perusal of the admirable results obtained in Italy last year. Some samples of antitoxin which I obtained from Italy were far more active than any obtainable elsewhere. I sought for some explanation of it and, I believe, was successful in finding one. In Italy the animals used in preparing serum were, I understand, thoroughbred horses obtained from racing stables. Such animals seemed to stand the injection of toxin extremely well; they showed very slight reaction, either local or general; the process of immunisation was extremely rapid; and the condition of immunity when once established could be maintained with a minimum of trouble. The risk of losing animals as the result of an over-dose of poison seemed also to have been reduced to a minimum. Since making that discovery I have always endeavoured to select horses which are as well bred as possible and have gradually succeeded in weeding out from the stables several of the old horses which were first used and replacing them by thoroughbreds. It is quite a mistake to suppose, as has been frequently stated by writers in the medical journals, that any old horse is good enough for the production of antitoxin. With old horses the process of immunisation is unnecessarily long and the risk of losing them during that process is enormous.

The Process of Immunisation.

For the first few injections it is necessary to use extremely small and carefully-measured doses of toxin. Roux recommended that the toxin used for the first few injections should be mixed with some mitigating substance, such as iodine trichloride or Gram's fluid. Such a mixture may be necessary in low-bred animals, but it is not so necessary in the case of thoroughbreds. I have found that a thoroughbred horse can almost invariably resist without undue disturbance a dose of 0·25 c.c. of a toxin which is fatal to guinea-pigs in the dose of 4 or 5 centigrammes.

The process of immunisation, as is well known, consists in the continuous administration of graduated doses of toxin until the animal treated shows neither serious local nor general disturbance as the result of the injections. The initial injections, being small in bulk, may be conveniently made under the skin of the shoulder, but when larger doses are required it is found more convenient to give the toxin by intravenous injection, and I have a syringe which I find very convenient for the purpose. It consists of the ordinary serum syringe to which I have added a three-way stop-cock. To the main nozzle is attached an injection needle by means of a rubber connexion; to the side branch is attached another rubber tube, which is passed through a cotton-wool plug into a bottle containing toxin. By this arrangement any amount of toxin may be injected with a minimum of trouble and inconvenience both to the operator and the animal. I have found it extremely useful in practice.

At various stages of the immunisation it is desirable to test the antitoxic power possessed by the serum. For this purpose a little blood can be obtained from the jugular vein by means of a small aspirating syringe. The protective power of the serum obtained from this blood can be readily ascertained by test experiments on guinea-pigs. After three or four months if the immunisation process has been carried on carefully and steadily the serum should possess an antitoxic power of at least from 500 to 700 units per 10 cubic centimetres. By the employment of such powerful toxins as those which I have already described it is no longer necessary to wait from six to twelve months before being able to obtain a serum of sufficient strength for clinical use.

Method of Bleeding the Animals.

There are two methods by which the blood can be obtained in sufficient quantities for practical use. The first is that generally employed, and consists in the insertion of a large cannula into the jugular vein which has been previously distended with blood by means of a cord passed round the base of the neck and pulled tight. To the end of the cannula is attached an indiarubber tube which is placed in communication with the bottle destined to receive the blood. In this manner the blood can be obtained in an aseptic condition provided the instruments and collecting flasks be sterilised previously to use. In some cases, however, when the animal has only a small, or not readily accessible, jugular vein, it is somewhat difficult to insert the cannula and the process occasionally also becomes tedious from coagulation of the blood taking place somewhere in the lumen of the tube. Another and somewhat more convenient method is one which I have myself adopted. No special care is necessary to secure complete asepsis, and the only instrument required is an ordinary sharp fleam such as is employed by veterinary surgeons. With this instrument I make an incision in the course of the jugular vein and collect the stream of blood, which issues with some force from the wound, in flasks capable of holding about one and a half litres. These flasks are of a form commonly known as filter-flasks. When filled they are transferred to an ice safe or cool chamber, where they are allowed to remain sheltered from light from twenty-four to thirty-six hours in order to allow complete coagulation to take place. About eight litres of horses' blood will, as a rule, yield at least three and a half litres of clear serum.

The next point is to ascertain the antitoxic value of the serum. For this purpose one must take a series of guinea-pigs of fairly uniform weight. One of these is used as a control animal, and receives a dose of diphtheria poison corresponding to the lethal amount. The others receive mixtures of various proportions of the serum which is to be tested with ten times the lethal dose of diphtheria toxin.

The following tables will give the details of the test above alluded to.

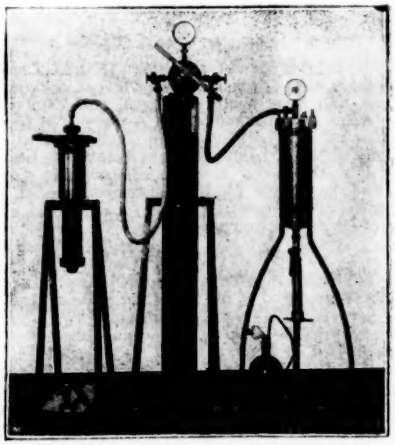
Results of Investigations.

Date.	Dose of serum.	Weight of guinea-pig, in grammes.	Reaction.	Dead in	Living after	Dose of toxin, in grammes.
Jan. 30th, 1896.	$\frac{1}{10}$ c.c.	490	Swelling.	52 hours	—	0·2
	$\frac{1}{10}$ c.c.	475	,,	56 ,,	—	,,
	$\frac{1}{15}$ c.c.	470	(?) ,,	—	6 days.	,,
	$\frac{1}{100}$ c.c.	500	Nil.	—	6 ,,	,,
	Control.	496	—	40–48 hrs.	—	,,
Feb. 11th, 1896.	$\frac{1}{10}$ c.c.	400	Swelling.	54 hours.	—	0·2
	$\frac{1}{10}$ c.c.	385	,,	55 ,,	—	,,
	$\frac{1}{100}$ c.c.	390	,,	—	7 days.	,,
	$\frac{1}{75}$ c.c.	424	Nil.	—	7 ,,	,,
	Control.	408	—	50 hours	—	,,
Mar. 6th, 1895.	$\frac{1}{10}$ c.c.	305	Swelling.	3 days.	—	0·2
	$\frac{1}{10}$ c.c.	295	Slight swelling.	—	6 days.	,,
	$\frac{1}{100}$ c.c.	310	Nil.	—	6 ,,	,,
	Control	328	—	40–48 hrs.	—	,,
May 9th, 1896.	$\frac{1}{10}$ c.c.	305	Swelling.	4 days.	—	0·3
	$\frac{1}{10}$ c.c.	290	(?) ,,	—	6 days.	,,
	$\frac{1}{100}$ c.c.	325	Nil.	—	6 ,,	,,
	Control.	300	—	48 hours	—	,,
June 15th, 1895.	$\frac{1}{200}$ c.c.	280	Swelling.	74 hours.	—	0·25
	$\frac{1}{100}$ c.c.	300	Slight swelling.	—	6 days.	,,
	$\frac{1}{100}$ c.c.	293	Nil.	—	6 ,,	,,
	Control.	305	—	52 hours.	—	,,
July 12th, 1895.	$\frac{1}{200}$ c.c.	285	Swelling.	7 days.	—	0·1
	$\frac{1}{10}$ c.c.	270	Nil.	—	7 days.	,,
	$\frac{1}{100}$ c.c.	290	,,	—	7 ,,	,,
	Control.	257	—	52 hours.	—	,,
Sept. 9th, 1895.	$\frac{1}{200}$ c.c.	233	Slight swelling.	—	6 days.	0·5
	$\frac{1}{10}$ c.c.	250	Nil.	—	6 ,,	,,
	$\frac{1}{15}$ c.c.	251	,,	—	6 ,,	,,
	Control.	262	—	2 days.	—	0·05
Dec. 5th, 1895.	$\frac{1}{200}$ c.c.	303	Swelling.	7 days.	—	1·0
	$\frac{1}{10}$ c.c.	290	Slight swelling.	—	7 days.	,,
	$\frac{1}{100}$ c.c.	317	Nil.	—	7 ,,	,,
	Control.	310	—	2 days.	—	0·1
May 5th, 1896.	$\frac{1}{200}$ c.c.	325	Swelling.	4 days.	—	0·2
	$\frac{1}{10}$ c.c.	310	,,	—	6 days.	,,
	$\frac{1}{200}$ c.c.	290	(?) ,,	—	6 ,,	,,
	$\frac{1}{400}$ c.c.	289	Nil.	—	6 ,,	,,
	Control.	360	—	53 hours.	—	0·02

It will be observed that the above tables, which are taken from my note-book, extend over a period of about eighteen months, and I would mention that they are typical of many dozens of similar investigations all of which time does not allow me to bring forward. In examining the details of these tables it will be observed that the doses administered are not uniform throughout. During the earlier periods a different standard of immunity-value was adopted, and a serum was issued possessing such a strength that one gramme would surely protect 50,000 grammes of guinea-pig against a lethal dose of diphtheria toxin. In the latter records, which correspond roughly to the period during which the Behring standard was adopted, the serum was tested in regard to its power of protecting small guinea-pigs against ten times the lethal dose of toxin—thus, a bottle which contained 10 cubic centimetres and was said to have an immunity-value of 600 units contained a serum of which $\frac{1}{600}$th of a gramme completely protected the animal against ten times the lethal dose of toxin.

The serum having been tested and found active has to be sterilised before it can be used with safety. For that purpose I have had a large pressure filter constructed, somewhat after the model originally designed by d'Arsonval, through which the serum can be forced by means of pressure supplied by liquefied carbonic acid gas, the pressure required being regulated by means of one of the very convenient pressure valves made for me by Messrs. Uhlmann and Keutgen of Lime-street, London, E.C.

FIG. 1.

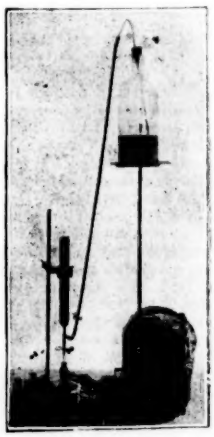


Apparatus used for filtering serum, showing two forms of pressure-filter, cylinder of CO_2, regulating valve, and receiver for filtered serum.

[Mr. Bokenham then gave a demonstration of the process by means of the apparatus as shown in Fig. 1 and continued:]

It will be seen that the conditions under which the filtration takes place are such as to almost absolutely preclude the possibility of the serum which has been sterilised by passage through porcelain filter tubes from becoming again contaminated by the introduction of chance microbes from the air. In order to carry out the rest of the process and to charge each bottle with the required quantity of serum I employ burettes of the model which is here shown (Fig. 2). By their use the measurements can be carried out with the greatest possible facility and with practically no risk of contamination.

FIG. 2.



Apparatus used in decanting and measuring serum.

I may mention, finally, that no single bottle of serum is allowed to leave my laboratory for clinical use until it has been securely corked and sealed under my direct supervision.

Devonshire-street, W.

A PLEA FOR THE EARLY RECOGNITION AND TREATMENT OF PUERPERAL FEVER.[1]

By JOHN W. BYERS, M.A., M.D. R.U.I.,
PROFESSOR OF MIDWIFERY, QUEEN'S COLLEGE, BELFAST.

I THINK we are all now agreed that puerperal fever is a preventable disease, and that the measures we should adopt to prevent its occurrence are very much the same as those used by the surgeon to avoid the onset of what was formerly called surgical fever, but which we know now to be sepsis. In our ideal obstetric practice we aim at having an aseptic patient, nurse, and medical attendant, and all our precautions, such as keeping the external parts of the parturient, our own hands, as well as those of the nurse, and all obstetric instruments and appliances aseptic, the greater employment of external examination, the limitation of vaginal touch only to acquire information which cannot be obtained by abdominal palpation, the not allowing the labour to be too prolonged, and the immediate suturing of any wounded parts,—I say all these precautions are taken with the object of preventing sepsis. One other preventive measure let me strongly urge, and that is a careful attempt on the part of the obstetrician to note in every pregnant woman any abnormal condition of the blood, such as hydræmia or anæmia, and to make an effort to correct this before the onset of labour. We know the part micro-organisms play in the causation of sepsis, but we have not yet thoroughly discovered why a lying-in woman seems to be so susceptible to their action. Perhaps it may be the condition of her blood or of her excreting organs; at all events, any abnormality in her condition should be noted before her confinement and carefully corrected. In this way her power of resistance to the action of microbic poisons may be strengthened. Unfortunately at times, notwithstanding all these efforts, our technique at some point breaks down and as a result we are called upon to encounter one of the most unfortunate, and too often fatal, conditions we can meet in practice. Cases of puerperal infection seem to be more common now in private than in hospital practice; the reverse was formerly the case. One explanation of this fact is probably because in maternities the most rigid antiseptic and aseptic practice is now in force, and also, I believe, because cases going wrong are recognised earlier and treated more promptly. There is also another cause too often met with in private practice, and that is the existence still of many nurses who do not know, who do not believe in, and who do not employ, modern antiseptic precautions. Cases of puerperal infection are, as we all know, most fatal, but I am firmly impressed with the belief that when the condition is recognised early and treated promptly many women might be rescued who are otherwise lost. In no condition is early treatment of greater importance than in puerperal infection.

What, then, are the early symptoms of puerperal infection and what lines of treatment should we employ when these symptoms appear? The early symptoms of puerperal infection are elevation of temperature and quickness of pulse, but this question of temperature and pulse raises two other important points: first, what is the effect of the lying-in period on these phenomena? and second, may the pulse be quickened and the temperature be raised during the lying-in period from conditions other than puerperal infection?

1. I am fully convinced that where aseptic and antiseptic precautions are complete the pulse and temperature during the lying-in period differ little from what they would be in the non-puerperal condition. We sometimes find that, especially in a primipara, there may be some elevation of temperature, 99° F. or occasionally 100° during the first day, due to the bruising and laceration of the soft parts, and I can corroborate the interesting observations of Dr. Probyn-Williams and Mr. Lennard Cutler[2] that the average temperature of primaparæ both on the morning and evening of the first day and in the morning of the second is higher than in multiparæ. On the evening of the second day the temperatures in each class of cases are the same, and remain, as a rule, identical afterwards. If the perineum is carefully sutured and the parts are kept aseptic I have found the temperature differ very slightly from the normal. A temperature above 99°, except in the first day, should always put the accoucheur on his guard that something septic may be brewing. As to the pulse, notwithstanding what is taught in many text-books that there is a marked slowing in the pulse after delivery, my experience has been that its rate is rarely below seventy and is more often from seventy-five to eighty in the minute. I have also noted the curious fact recorded by Dr. Probyn-Williams and Mr. Cutler that during the lying-in period the pulse-rate is a little quicker when taken in the morning than in the evening. I have also observed the rate of the pulse quickened in some cases of forceps delivery where chloroform was used (from 100 to 110 or 120), and remain so for twelve, eighteen, or twenty-four hours without any ill effects. In nervous, highly-strung women of the upper classes the same quickness of pulse often occurs for a day or two after delivery. In both these types of cases the quick pulse differs altogether from the rapid pulse met with in postpartum hæmorrhage in that the beats do not run into one another, they are distinct, with an appreciable interval, and there is evident vascular tension.

2. May the pulse be quickened and the temperature be raised during the lying-in period from conditions other than puerperal infection? I am sure every obstetrician of experience has come across cases in which he has felt for a time very uneasy about his recently-delivered patient from fever having set in with quick pulse, and yet the subsequent progress of the case has shown that there was nothing septic in the condition. Broadly speaking, we are kept right in our diagnosis in such cases by the following points: (*a*) there are usually no special pelvic or abdominal symptoms; (*b*) the lochia are normal; (*c*) the secretion of milk continues; (*d*) careful examination enables us to discover some complicating disease present at an early period, which in itself is sufficient to account for the patient's state; and (*e*) the history of the case and the patient's previous medical condition help in diagnosis.

Here are very brief details of some cases from my note-books in which, during the lying-in period, there were fever and quick pulse not depending on sepsis.

1. *Tonsillitis.*—I was asked to see the wife of a medical man who, on the third day after delivery, had a shiver, followed by a temperature of 103° F. and a pulse of 120. She complained of sore-throat, and this culminated in a sharp attack of tonsillitis, a disease she was very subject to. No other pathological condition developed, and when the abscess in the tonsil opened she became convalescent. The local signs appearing early and her previous tendency to quinsy put sepsis out of the question and quickly relieved her husband's mind.

2. *Appendicitis.*—A patient who had been under the late Mr. Arthur Durham's care in London with an attack of appendicitis was attended by me at her first confinement. Three days after the birth of the child she became feverish from a recurrent attack of the same complaint, which, with rest and treatment, gradually subsided. For a time it looked like a commencing septic case. The previous history and early appearance of the former local trouble were the points in the diagnosis.

3. *Influenza.*—During the late influenza epidemic women during the puerperium were often attacked, the condition in some cases simulating puerperal septic infection. I saw one most puzzling case where a patient became sharply ill with high fever on the fourth day after delivery. When I examined her with her medical attendent on the sixth the temperature was 104° F., the pulse 130, and she was perspiring profusely, and looked as if attacked with acute septicæmia. A few days afterwards her condition decidedly improved, and at the same time other members of her household were seized with symptoms of influenza, thus establishing the diagnosis. In another case a patient in the eighth month was taken with influenza (others of the same family being ill), followed by premature labour, with fall of pulse and temperature, and on the third day after delivery she was seized with a rigor accompanied with renewal of fever, which culminated in pneumonia, from which she recovered.

4. *Pelvic abscess.*—A woman had her cervix divided for dysmenorrhœa, the operation being followed by a feverish attack, which passed off, leaving the patient subject to attacks of right-sided pelvic pain. After a premature (first) confinement she was seized with high fever and a swelling developed in the right posterior quarter of the pelvis, which

[1] A paper read in the section of Obstetric Medicine at the meeting of the British Medical Association at Carlisle, July, 1896.
[2] Transactions of the Obstetrical Society, vol. xxxvii., p. 19, &c.

suppurated and suddenly emptied itself per rectum, after which the patient made a good recovery.

5. *Rheumatism.*—I have seen cases in which this disease set in after delivery and in which at first the condition was very like septic infection, the subsequent progress of the patient settling the question of diagnosis.

6. *Suppurating ovarian tumours.*—I have seen in consultation two cases in which fever in the puerperium was caused by suppurating ovarian tumours, which I removed successfully by abdominal section, the patients both making good recoveries.

7. *Phthisis.*—I have also attended cases where high fever early in the lying-in period was occasioned by the rapid development of tuberculosis which for a time simulated septic poisoning.

It is said by some observers that constipation may occasionally give rise during the puerperal period to fever which is due to the absorption of ptomaines, and that a free action of the bowels lowers the temperature by sweeping away these poisons. I have not seen such cases, and with strict aseptic and antiseptic precautions I doubt if they really occur. I think, then, if we exclude conditions such as I have mentioned, and which, after all, are not very common, we are warranted in concluding that it is on the whole rare to have fever and quick pulse in the first five or six days after labour from any other cause than infection, and in my own experience the earlier the symptoms of puerperal infection appear after labour the severer will be the course of the disease and the graver the prognosis. The very worst cases are those which go wrong soon after delivery. If a patient gets a week over normally she may still become infected, but if so the disease will likely become local and there will be an absence of grave constitutional disturbance. It is during the first few days after delivery that, in the language of bacteriologists, the body is apt to prove so favourable a culture ground for micro-organisms, the explanation of this being the presence of fresh wounds, the lochia, and the bare placental area. There are two kinds of infective disease which may be met with in the early stage of the lying-in period—sapræmia and septicæmia.

1. In sapræmia the system is infected by a chemical poison due to the action of micro-organisms on dead decomposing matter, such as the lochial discharge, pieces of placenta, membrane, &c. The poison does not multiply in the blood, but really outside the body at the seat of a wound, as, for example, the placental area, or wound in the parturient canal, and its effects depend on the amount of the poison absorbed. If we remove the dead decomposing matter in which the microbes are acting, and if the dose already taken up is not a fatal one, the chances are the patient will recover.

2. In septicæmia, on the contrary, the symptoms are from the growth and multiplication of the micro-organisms in the blood which they have reached through a wound. They can enter through the smallest wound, and there seems to be no relation between the extent of the wounds received in parturition and the amount of the lochial discharge and the tendency to septicæmia. The fact that the poison is being constantly produced inside the body makes the disease so serious.

While, from a pathological and etiological point of view, these two conditions are so distinct, yet clinically, in the early stage, the diagnosis between them is difficult, nay, even at times impossible, as the symptoms at first are the same in both, and the problem is still more complicated by the fact that they often occur together—that is, the patient is the subject of a mixed infection. One thing, however, is clear, it is the alteration in the pulse and temperature during the lying-in period which tells us our patient is not in a normal state, and it is of the utmost importance that a correct record be made of these two phenomena night and morning during the first five or six days after delivery, so that we may at once be put on the alert in case the patient gets infected. Let me suppose (to make the matter practical) that a patient on the third or fourth day after delivery, with or without an initial rigor, has a temperature of 103° or 104° and a pulse of from 120 to 130, and that there are no signs of any of those conditions present which occasionally occur during the puerperium, and the diagnosis of which I have discussed, our wise plan is to assume that she is infected. We must not let the nurse or patient put us off our guard by saying the breasts are the disturbing element or that she has "only a chill"; we must not be led into error because the abdomen is soft or because the lochia are sweet and have not ceased to flow. In nine out of ten cases the rise of temperature and quickness of pulse indicate she is infected, and if we act at once she may be rescued. Precious time is often lost in simply giving antipyrin, quinine, alcohol, or diaphoretics, and at the next visit the patient may have had another shiver, the abdomen may be tender or slightly swollen, and she may be beyond chance of treatment. I would therefore strongly urge that when fever with quick pulse sets in we should at once begin local treatment. Even though the symptoms, as may afterwards turn out to be the case, are due to other conditions than puerperal infection, the local treatment can do no harm, and in the vast majority of cases the rise of pulse and temperature shows the patient is infected. Before commencing treatment a thorough examination of the patient must be made in the following order: the pelvic floor (perineum, &c.), vagina, and uterus; and it is to be noted that wounds at the lower part of the parturient canal are very serious from the circumstance that, being near the outer world, organisms enter easily. As a rule, now, tears of the perineum are sutured at once. When this is not done they are at times very liable to become septic. I have seen cases of puerperal infection where the wounds of the pelvic floor have been covered with a diphtheritic deposit, and at other times both the torn perineal edges black and gangrenous. When these wounds are seen to be unhealthy they should be washed with a 1 in 1000 corrosive sublimate solution, curetted, or touched with the actual cautery or with nitrate of silver solution (sixty grains to the ounce), and then dusted with iodoform. Abscess of Bartolini's gland should be freely opened, cauterised, and packed with iodoform gauze. Septic and diphtheritic vaginitis, if present, should be thoroughly treated in the same way as the septic or diphtheritic conditions of the pelvic floor. The uterus must then be explored, and it is to be remembered that in the great majority of cases puerperal infection emanates from it. The septic virus may have entered through its lymphatics or the patient may have become infected through a decomposing mass lying in its cavity. Certain types of women are apt to become infected: (1) the anæmic, and (2) those who, owing to premature rupture of the membranes, have had a long and tedious first stage. In the prophylactic management of such cases the most rigid aseptic and antiseptic precautions must be taken.

In the local treatment of the uterus we have the choice of three methods: (1) simple irrigation; (2) continuous irrigation; and (3) curettage. The plan to be adopted will depend on the condition ascertained by a digital examination. If the finger finds the cervix markedly patulous, and if on exploring the interior of the uterus one feels any foreign mass (often putrid and foul-smelling), or if there is the sensation of a soft tissue which on pressing with the internal finger seems to break down, then even at this early stage the uterus should be carefully curetted, the indications for this operation at this period being, fœtor still persisting after douching the vagina, a patulous cervix and the detection of some decomposing body in the uterine cavity. On the other hand, if the endometrium feels normal (that is, if there seems to be no soft tissue breaking down) simple irrigation is called for, with certain precautions in its technique. 1. The gravitation douche, not the syringe, should be used. 2. The intra-uterine tube should be large in order that a good flush may remove any clots, remains of membranes, débris, &c. It should be passed up to the fundus, and I have found it a useful plan to seize the anterior lip of the cervix with a volsella so as to steady the uterus and render its cavity straight. In this way the douche-tube is more easily passed up to the top of the cavity of the uterus and every part flushed. I prefer for the first douche to use a 1 in 4000 corrosive sublimate solution unless the patient has renal disease or has suffered from postpartum hæmorrhage, when some other antiseptic should be employed, as creolin, lysol, or iodine; it is to be noted, as has been pointed out by Watson-Cheyne,[2] that these antiseptic solutions, if too strong, act deleteriously on tissues already weakened by contact with poisonous products, and thus by causing their death may afford more pabulum for the putrefactive micro-organisms; hence, too, powerful antiseptics should not be employed. 4. In douching out the uterus plenty of fluid should be used; instead of one or two pints from eight to ten should be employed, and the temperature of the fluid should be 100° to 105° F., as in

[2] Allbutt: System of Medicine, vol. i., p. 596.

this way the parts will not be injured and owing to the heat the douche will have a stimulating effect. 5. In douching care should be taken to see and to examine any membrane, piece of débris, &c., which may come away. If after this simple irrigation of the uterine cavity the temperature falls suddenly or gradually, the pulse at the same time becoming slower, it need not be repeated. On the other hand, if, after irrigating the uterus, the temperature remains unaffected, or if after a fall it rises the next day, I would advise the douche to be used again, and if it brings down the temperature and pulse the case may take a favourable turn. Suppose, however, notwithstanding the repetition of the simple irrigation, the temperature remains unaffected or even rises, and the patient has further rigors, then we must use one of two methods—either continuous irrigation or the curette. Professor Pinard of Paris is a strong advocate for continuous irrigation, which he recommends if the temperature remains high on the evening of the third day. He thinks the continuous irrigation of advantage, even if afterwards it is decided to curette the uterus, as it renders the endometrium as aseptic as possible, and the rise of temperature and shivering, which I have often seen follow curetting, are either absent or less marked, according to Professor Pinard, if douching has been previously used. The continuous irrigation may be employed for as long as twelve hours or more. Weak carbolic lotion, lysol, or boracic acid may be used as the antiseptic in such conditions. This continuous irrigation has, I think, not received sufficient trial in English obstetric practice; in many cases it has a wonderful effect, and from the Amsterdam clinic Huinereck[4] reports fifty-two cases of puerperal sepsis treated by prolonged irrigation with 1, 1½, or 2 per cent. carbolic acid or a 1 in 4000 corrosive sublimate solution; following this irrigation the inner surface of the uterus was painted with undiluted tincture of iodine; all those treated in this way recovered, the treatment being begun as soon as the fever developed. It may be objected to irrigation of the uterus that (1) the mere surface of the endometrium is affected, hence the organisms on the surface alone are rendered inert, while those deeper in the tissues are not acted upon; (2) repeated douching is often painful and entails considerable disturbance of a patient who is already weak and nervous; and (3) such repeated manipulations may really run the risk of conveying more septic infection. On the other hand, the practical results after this method of treatment are, I know, most evident in many cases; and, according to Professor Pinard, it favours the subsequent use of the curette. There is a type of case occasionally met in which irrigation is of great value, and that is when, owing to the decomposition of a syphilitic fœtus, the woman becomes infected before delivery. Here douching out the uterus after labour has begun before dilating the cervix is good practice, and the same method can be used if after delivery the temperature keeps up or if after a fall it again rises. If, however, in spite of this continuous irrigation the patient's condition does not improve I would advocate the curetting of the uterus, an operation which from frequent favourable experience in such cases I can strongly recommend, and if the patient is no better on the fourth day it should then be employed, the *rationale* of its action being that the curette removes any decomposing material and the lining membrane of the uterus in which the bacilli find a suitable culture medium for their growth. If carefully done I have seen no harm accruing in the use of the curette in the postpartum uterus; sometimes the operation may be followed by shivering or slight hæmorrhage, but if the uterus is packed with iodoform gauze (which I think is the best plan) the risk of bleeding is anticipated. I remove the gauze in twenty-four hours, and if after this the temperature again rises I would re-curette, as the chances are there is something still which needs to be removed from the uterine cavity. It will be seen I recommend curettage to be done early in infected cases only under certain conditions which I have mentioned, but as a rule it is better not to employ the curette until irrigation has been first tried. If the uterus is curetted on the fourth day of the patient's illness it has this advantage in its favour, that the necrosing endometrium is beginning to separate. On the other hand, if examination on the first day of a patient's illness shows that the uterus is empty curetting will really do harm, as the morbid process may be purely local on the surface of the mucous membrane and the use of the curette will be bad, as we may in this way open up channels by which fresh infection may spread. In cases in which irrigation and curettage fail the only other measure we can try is the serum treatment—that is, the injection of the anti-streptococcus serum; but up to the present this plan has not been very successful. At the very interesting discussion which took place at the Obstetrical Society of France in April, 1896, Dr. Charpentier, reporting on cases treated by anti-streptococcus serum, was compelled to admit that the treatment had not so far fulfilled the expectations raised when it was first introduced. Dr. Roux and Dr. Marmorek state that the anti-streptococcus serum can have no effect if, simultaneously with its administration, one continues the use of intra-uterine treatment (injections, swabbing, curettage, &c.), and Dr. Marmorek advised medical men who ask for anti-streptococcus serum to abstain from any other form of treatment, suggestions against which several of those taking part in this discussion strongly protested. Dr. Budin saying he could not understand why they should be told to renounce cleansing the uterus in cases of infection by irrigation, swabbing, and curettage in favour of a very doubtful measure which promises well for the future, but offers little security for the present.

At the present time the whole question of sero-therapy in the treatment of puerperal infection is still in an experimental stage. It may be the treatment of the future. We want, however, more information as to the action of the serum and the class of cases to which it is suitable. No doubt we may soon acquire this and the carefully recorded case of "Acute hæmorrhagic septicæmia treated by anti-streptococcus serum" by Mr. Ballance and Mr. Abbott, with the additional note on the preparation of anti-streptococcus serum by Mr. Bokenham,[5] is of the greatest importance in showing what sero-therapy will do in a bad case of septicæmia. Quite recently another method of sero-therapy in the treatment of puerperal septicæmia was brought before the Paris Academy of Medicine on June 30th, 1896, by Professor Pozzi, who read a report on a paper by Professor Duret of Lille on this subject. This method, which is suitable alike to septicæmia following operations as well as in the puerperium, is specially recommended in desperate cases when death is imminent, and consists in intravenous, followed up by hypodermic, injections of sterilised water containing chloride of sodium in the proportion of from 7 to 10 in 1000, at a temperature of 104° F., and of this solution from two to five litres (say three to five pints) may be injected in the twenty-four hours. The *rationale* of this treatment is that, in the first place, by raising the intra-vascular pressure it increases the patient's power of resistance, enabling her to carry on the struggle against the disease. In cases of septicæmia the blood-making organs thus get time to produce new blood-corpuscles for phagocytosis, and the kidneys, the secretion of which is increased, eliminate the toxines. Care should be taken to see the kidneys are in good working order before resorting to this method of treatment.[6] While I have had experience of the great value of saline injection in cases of severe hæmorrhage I have not yet tried its use in puerperal septicæmia. It will, however, be well worth employing, as Pozzi advises, in desperate cases. While thus strongly advocating local treatment in puerperal infection I would also recommend that every effort should be made to keep up the patient's strength by the administration of concentrated nutritious food in a liquid form, quinine, digitalis, strychnine, and alcohol. Of abdominal hysterectomy, as practised by some of our American *confrères* in puerperal fever, I have no personal knowledge, but when there is any localised mischief in the abdomen surgical interference is, I know from experience, of the greatest value.

Let me say, in conclusion, on every one of us engaged in obstetric practice devolves the duty of forestalling and preventing puerperal infection. We have to watch that those who are expecting to be confined shall be in the best possible condition to sustain the exhausting fatigue and risk of child-bearing. Our endeavour should be to prevent by prophylactic measures the onset of infection, but when, in spite of our efforts, this ensues then, by early recognition of its occurrence and by prompt treatment, I am more and more convinced that not only may the death-rate be minimised, but that there shall be less liability to subsequent gynæcological disease. This requires, not only experience and

[4] Nederl. Tijdschr., V. Verlosk en Gynecol., Jahrg. v., Afl. 2.

[5] Brit. Med. Jour., July 4th, 1896.

[6] Semaine Médicale, July 3rd, 1896.

practical training, but it demands the most unremitting care on the part of the practitioner. I have endeavoured, I know in a very feeble way, to contribute my quota of experience on this most important subject, in the hope that, from the discussion that will follow in this section, we may from the ripe experience of the members present gain more help in the treatment of a condition that has been hitherto so fatal and that is always most worrying and vexatious to the medical attendant.

Belfast.

MENTAL OVERSTRAIN IN EDUCATION.[1]

BY G. E. SHUTTLEWORTH, B.A. LOND., M.D., M.R.C.S. ENG., &C.,

FORMERLY MEDICAL SUPERINTENDENT OF THE ROYAL ALBERT ASYLUM, LANCASTER.

IN venturing to make a few remarks upon a somewhat trite subject I must plead as justification the fact that, notwithstanding much that has been said and written in the way of warning by men more experienced than myself, there still exist indications of a tendency to mental overstrain in certain departments of education. In the consideration of the subject it may be well to clear the ground by discussing the questions (1) What is education? and (2) What is meant by educational over-pressure, or such pressure in education as is likely to result in mental overstrain? and (3) finally, to inquire into the incidence, the etiology, and the signs of such over-pressure. A few words may follow as regards prevention and treatment.

To answer the question, What is education? it may be useful to consider what it is not. With some so-called educationalists I fear the idea still lingers that it consists of cramming a mind with as much of as many subjects as possible. Our laughing philosopher *Mr. Punch* has, however, very truly observed that "you cannot ladle grammar, arithmetic, and geography into a child's brain as you would brimstone and treacle into his stomach"; indeed, a smattering of philology will serve to show that the word "education" means not "putting in" but "drawing out." And, bearing in mind the physiological interdependence of bodily and mental development, we may say that true education consists in processes of training which will produce in a given individual the most favourable evolution possible of all the faculties both of body and mind. A rational educational system will of course recognise the fact that children are not cast in the same mould, that there are inherent—often inherited—differences in each pupil's powers, and that to attain the best results instruction must be adapted to idiosyncrasies and proportioned to varying capacities. Moreover, the comprehensive and far-reaching character of education must be borne in mind, including as it does—as Paley puts it—"every preparation that is made in our youth for the sequel of our lives." From the medical standpoint, indeed, we shall reply in the affirmative to the query of Plato, "Is not that the best education which gives to the mind and to the body all the force, all the beauty, and all the perfection of which they are capable?" Over-pressure in education may in brief be described as a neglect of the principles just set forth—a neglect which cannot fail to lead to mental overstrain. Thus a cast-iron code imposing for each year of age a definite standard of acquirement, heedless of the varying capacities of children, could not fail to produce it. A disregard of physical conditions underlying mental evolution and of critical epochs of development (especially in the female sex) affecting capacity for exertion is another efficient cause. And the undue excitation of the unstable nerve cells of a child of neurotic heredity to such a pitch of activity as might be harmless in a normal child will in the case of the former be apt to constitute overstrain. Over-pressure, indeed, is not an absolute quantity, but has to be estimated in relation to the personal factor in each case. It may, therefore, be defined in terms of educational work as that amount which in a given case is likely to produce excessive strain of the physical or mental system, or both.

We pass now to the consideration of its incidence. Since 1870 every young Briton has been compelled to submit to educational processes of some description or other between the ages of six and thirteen. School attendance is, however, allowed to count towards a grant from the early age of three, and in some schools there are what are called "babies' classes." Formerly the leading idea with regard to these poor juveniles was that the function of school was to teach them to sit still, regardless of the incessant impulse to movement which characterises all healthy young animals. Charles Kingsley long ago satirised the "foolish fathers and mothers who instead of letting their children pick flowers and make dirt-pies, as little children should, kept them always working, working, working ..... till their brains grew big and their bodies grew small and they were all changed into turnips with little but water inside." And in days not far distant we have heard of hydrocephalus as an alleged product of mental overstrain in early years; indeed, it is reasonable to conclude that, where a proclivity to tuberculosis exists, cerebral hyperæmia and the stuffy germ-laden atmosphere of certain school-rooms may conduce to tubercular meningitis. To-day a more enlightened view obtains as to the treatment of infants; and the Educational Department now officially directs the fostering of "the spontaneous and coöperative activity of such scholars." The musical drill, kindergarten games, varied occupations, and other exercises now so much in vogue in infant schools, are no doubt extremely beneficial, and with sanitary safeguards the infants in our elementary schools are better off than they would be at home. Although precocious children are sometimes injured by being pushed into prominence it is not in the infant schools that we shall often meet with instances of overstrain. Nor is there nowadays, I think, so much evidence of over-pressure in elementary schools for boys and girls as was noticed some twelve years ago by our distinguished *confrère*, Sir James Crichton Browne. At that time he proved to his own satisfaction (if not to that of the Education Department) that more than one-third of the children attending elementary schools in London suffered from habitual headache (52·3 of the girls and 40·5 of the boys). He argued, moreover, from the increased prevalence of nervous disease in children—and he cited in support of his argument the increase since the passing of the Education Act in the juvenile mortality from encephalitis, from diabetes, from kidney and rheumatic diseases (claiming these affections as "diseases with marked nervous affinities")—and from the frequency with which he had met with chorea, with stammering, and with neuralgia in school children examined, that over-pressure certainly existed in connexion with compulsory education in elementary schools. In those days it would seem to have affected most severely the backward children, classified by Sir James Crichton Browne as either "dull, starved, or delicate," the code requirements of that date conducing to the whipping up as far as possible of all children to definite age standards. Happily grants are no longer made on the percentage of passes in standards arranged according to age, but after examination of the scholars by sample. Her Majesty's Inspectors are also authorised to ask the teacher to select a few of the best children for examination in the several subjects, so that the tendency now is not so much to press unduly the dull children as to work up the brighter children to a point that shall dazzle the inspector. Unfortunately, bright, precocious children are not unfrequently the offspring of a neurotic stock, and it is just these that are likely to break down under emotional excitement and the pressure of an examination in prospect. From all I have been able to gather from teachers and from the children's hospitals in London it would seem that it is this class that nowadays furnish cases of school headache, of chorea, and other nervous affections, more particularly about the periods of examination. In secondary education the incidence of over-pressure would seem to be more marked in the preparatory schools than in the public and other schools for senior boys. This is probably an instance of the "survival of the fittest," and there is much reason to fear that not a few promising boys, approaching the trying epoch of puberty, are sacrificed to the Moloch of competitive examination for entrance scholarships. I do not say that in schools for senior boys there is no over-pressure, but in the great public schools and others following their methods the tendency to brain-strain is counteracted by a goodly proportion of outdoor exercise and physical exertion in the way of games. Happily schools of the type of Dr. Blimber's, satirised by Dickens as "a great hothouse in which there was a forcing apparatus constantly at work, and mental green-peas were

[1] A paper (taken as) read in the Section of Psychology, British Medical Association annual meeting, July 31st, 1896.

produced at Christmas and intellectual asparagus all the year round," are not now so common as formerly.

With regard, however, to secondary schools for girls I fear that it is impossible to speak with favour of the hygienic aspects of the system pursued in many of them. In fierce emulation of methods formerly designated "propria quæ maribus," some at least of the High Schools for Girls seem to have overlooked the physiological conditions and necessities of budding womanhood. It has been well remarked that "puberty with girls is a period of profound nervous and neuro-psychological import. ..... Many a weak woman could, if she only knew, trace back her weakness to an overstrain at this period of life." It is most unfortunate that too often there is a tendency (for which parents equally with teachers are responsible) to subject to serious and exhausting study girls of from twelve to fifteen years of age, just at an epoch when they should have the minimum of school-room work and the maximum of out-door exercise and recreation. The rapid growth and development which occur at this period and the physical changes concerned in the establishment of the menstrual function constitute a drain upon the girl's organism, leaving little reserve of strength for arduous mental exertion. What, however, do we find is the actual curriculum of high school girls at this age? Four hours' almost continuous work in the morning exclusive of extra subjects in the afternoon, with a minimum of from two to three hours' preparation in the after-part of the day. And to this is superadded time necessarily devoted to the practice of music and other feminine arts. Where, on a winter's day at least, is proper exercise and recreation to come in? The public school boy has at least two hours' compulsory play (usually in the open air) during the afternoons; it is the exception, I believe, at girls' high-schools to have anything so plebeian as a playground, and I know of one where a well-equipped gymnasium exists but is never used for gymnastic exercises properly so-called. The morning interval, nominally of ten or fifteen minutes, is not usually spent in brisk exercise in the open as would be the case with boys, but in munching buns, or nibbling biscuits, or, at the best, in perambulating corridors with arms entwined around companions' waists after the manner of females. Is it to be wondered at that as the term proceeds the roses we have been used to associate with English maidens' cheeks gradually fade and signs of nervous exhaustion show themselves? Dr. W. S. Playfair remarked in a paper[1] read at the last annual meeting of the British Medical Association that some high school mistresses seem to hold the view that in relation to education the menstrual function may be ignored; and he gave an instance in which the head of one of the colleges for girls had written to the medical father of a broken-down pupil saying that they—i.e., the college authorities—considered that "the menstrual function was not of consequence, and that when it was in abeyance for a time it came all right afterwards when the girls left school"—a sentiment rather reminding one of the story of King Canute and the flowing tide!

In these three points then—(1) excessive hours of study, especially during spurts of growth and development; (2) deficiency of systematic out-door exercise and recreation; and (3) disregard of physiological functions differentiating the capacity for work at certain times of girls as compared with boys—I think the high school system needs amendment. In Women's Colleges of the type of Girton, Newnham, and the Royal Holloway there is more elasticity in the curriculum and a certain safeguard against over-pressure in the way of out-door sports. Even there, however, there is risk in the frequently recurring examinations, which are taken more keenly and conscientiously by young women than by young men of corresponding age; and with those of bad heredity especially there is a tendency to break down under the strain of competition. During the last year I have had under my observation the case of a girl aged nineteen, a student at a women's college, whose health completely gave way under pressure of the Christmas "trials" (as the terminal examinations are appropriately called) which unfortunately coincided with a menstrual period, and the patient being of neurotic tendency developed decided symptoms of nervous exhaustion.

We may now briefly consider the etiological factors of mental overstrain. First and foremost come a neurotic family history and predisposition to tubercle. So far as I have seen, signs of overpressure are rarely met with except when there is such morbid heredity, whether in elementary or in secondary schools. Secondly, malnutrition. In elementary schools there is no doubt that over-pressure often means under-feeding, and even with scholars of the better social grades emaciation consequent on shirking of meals predisposes to mental breakdown. So, as Burns's grace expresses it,

> "Some hae meat that canna eat
> And some wad eat that want it."

Thirdly, in the female sex, disorders of the menstrual function causing irritability and deficient powers of application. The influence of pernicious practices during the period of sexual development in the case of boys (and, indeed, with both sexes) must not be overlooked. Finally, with one or other of these predisposing factors we have the exciting influence of over-stimulation of brain cells resulting in subsequent exhaustion.

Amongst symptoms noticed we may specify the following. In young children a weary, preternaturally old look, to which the furrowed forehead, knitted brow, bagginess around the eyes, and sallow complexion all contribute. A general fidgetiness and irritability—sometimes muscular twitchings especially seen about the angles of the mouth—are noticed; and there is a general want of tone and balance about the muscular system, so that the hand when extended assumes a feeble pose and we may often see or feel finger twitches. In more severe cases actual jactitations of the limbs occur and the symptoms pass, especially with girls, into well-marked chorea. Headache is frequent and an habitual attitude is with the hand pressed against the brows; sleep is, as a rule, disturbed. With young children transient nocturnal hyperpyrexia is not infrequent, and night terrors sometimes occur. In some cases the tongue and lips are tremulous and speech is stammering. There is, as a rule, evidence of digestive disorder such as foul tongue and fœtid breath; often we find a distaste for wholesome food, sometimes a perverted appetite, and an over-fondness for sweets. In pubescent boys and girls the neurasthenic symptoms tend to be more marked, such as incapacity for sustained attention (aprosexia), feebleness of memory, a tendency to answer exactly opposite to what is known to be correct (heterophemia), neuralgia, and (in girls) hysteria, sleeplessness or sopor, a want of pluck and general apathy. These symptoms are often associated with such physical signs as a sallow earthy complexion, anæmia, constipation, and what has been designated "anorexia scholastica." Aversion to solid food in the early part of the day is a frequent symptom, with a tendency to substitute nerve-titillating tea for more nourishing diet, and (as we have seen) it is not only from want, but frequently from want of appetite, that over-pressed children go to school minus their breakfast. I have myself had the opportunity of watching a high school girl, naturally of good physical as well as mental development, whose morning appetite, vigorous at the beginning of term, becomes small by degrees and miserably less as work presses and the examination period approaches. And, on inquiry as to the causes of breakdown of the student at the women's college referred to, I found that though the principal meals were served in hall the more studious were apt to shirk the solid viands and whip up their flagging powers with tea, made (*ad lib.*) in their own rooms.

A few words on prevention and treatment must close this paper. As regards prevention much rests with the parents themselves, who are but too apt to shirk responsibility and throw all blame upon the teachers. The poorer classes have indeed but little option as to the sort of education to which they will subject their children, the Education Department acting the part of Providence in prescribing the curriculum. But it has not always been a wise Providence, and its decrees might have been at times more judicious had it been able to avail itself of the assistance of a competent medical adviser. It is a hopeful sign that many of the larger School-boards have appointed medical officers, and as their opportunities of influence increase we may look for an improvement not only in the hygiene of schools but of educational systems. Parents of poor children should, however, themselves make a vigorous stand against home lessons and undue detention, the most common causes of over-pressure in elementary schools. As regards secondary schools, parents have more in their own hands. It is indeed hard to resist the fashion of the day, but it is clearly the duty of medical men to protest against anti-physiological practices in schemes of education. Parents who know or who are advised that their children are of unstable nervous temperament must beware of the dangerous strain of competitive examinations in such cases, especially at critical epochs of development. Much may be done by favourably regulating the home

[1] Brit. Med. Jour., Dec. 7th, 1895, p. 1408.

environment of children attending day schools in the way of punctuality at mealtimes, insistence on sufficient out-door exercise and ample hours of rest, a point being made of going to bed early. Of course, with overstrain as everything else, the rule of action should be "*obsta principiis*," and warning signals, however slight, should not be disregarded.

The condition precedent to successful treatment is naturally the withdrawal of the pupil from conditions known to be injurious, even at the loss of a term's schooling. A term's brain rest is not always time wasted, and to wait for the full development of threatening symptoms is fatuous policy. The late Dr. Octavius Sturges gave (in a paper read at the International Congress of Hygiene, 1891, vol. x., p. 20) the pitiable history of five cases of what he designates as "school-bred chorea." These poor children having been kept with their "noses to the grindstone" in spite of morbid restlessness, the significance of which was not appreciated by the teachers, "were only removed from school when St. Vitus's dance had developed so fully as to render them absolutely incapable of school-work and sometimes even of speech." Had those in charge been aware of the "hand-test," so easily applied, timely relief might have been given and the worst symptoms averted. As to treatment, one may say in a general way, use all means that will invigorate the body and cheer the mind. "A change" is often recommended, but let it be a change with an object, for nothing is worse in mental overstrain than inactivity and leisure for morbid introspection. Physical exercise in some congenial form and taken in moderation (e.g., bicycling, boating, golf, tennis, or skating) may be of great value in restoring the balance of the circulation. A course of light literature is frequently of advantage, and an interest in artistic or manual work, such as painting or wood carving, or, what is still better, some outdoor occupation, such as gardening, may be of signal service. Time does not permit of the discussion of drug treatment (the indications for which will vary in different cases); but, as a rule, it may be said that, having quickened the sluggish excretory functions by due purgation and broken bad habits of insomnia by a short sedative course of sulphonal or paraldehyde, ferruginous and nervine tonics are of value. Nutrition being often much impaired, a course of massage and feeding on the Weir Mitchell system may be of service in extreme cases, and as a rule the administration of cod-liver oil, maltine, &c., is beneficial as conducing to that comfortable condition of body which, according to Dr. Clouston and other evangelists of the "gospel of fatness" is distinctly favourable to mental contentment.

Richmond Hill.

THIRTY-SIX CASES OF OPERATION FOR THE RADICAL CURE OF HERNIA.

By D. MACARTNEY, M.A., M.D. GLASG.,
SURGEON TO THE DISPENSARY OF THE WESTERN INFIRMARY, GLASGOW.

THE subjoined list includes all the cases that have come under my care from February, 1887 to January, 1895. Such cases as I have operated on since the latter date I have not reported, for the reason that a year at least should elapse before recording such an operation if the results of operation are to be at all measurably reliable.

CASE 1.—A girl aged twelve years, with left inguinal hernia into the labium. She was operated on on Feb. 23rd, 1887, the sac being ligatured and the ring sutured. There was no return eight years after.

CASE 2.—A boy aged two years, with congenital right inguinal hernia. He was operated on on Oct. 31st, 1888, by Buchanan's method. There was no return seven years after.

CASE 3.—A man aged twenty-nine years, with left oblique inguinal hernia of large size, which could not be kept up with a truss and which incapacitated him for work. The sac was dissected out, twisted, and ligatured at its neck; the pillars of the ring and the walls of the canal were sutured. The operation was performed on June 9th, 1892. There was no return.

CASE 4.—A male aged three years, with right inguinal congenital hernia. Operation was performed on July 14th, 1892, by Buchanan's method. There was no return.

CASE 5.—A youth aged nineteen years, with right oblique inguinal hernia. The sac was ligatured and removed and the ring sutured over the stump. An undeveloped testicle lying in the canal was removed. There was no return. The operation was performed on July 14th, 1892.

CASE 6.—A boy aged thirteen years, with right oblique hernia of two months' duration. There was a very thin sac. The neck of the sac was ligatured and the pillars were brought together over the stump. There was no return three years after.

CASE 7.—A woman aged forty-five years, with right inguinal hernia. Operation was performed on Dec. 8th, 1892. There was no return three years after.

CASE 8.—A man aged forty-four years, with right inguinal hernia of four years' duration. A truss was of no avail. Operation was performed on Dec. 15th, 1892, by O'Hara's method. There was no return.

CASE 9.—A man aged sixty-one years, with double inguinal hernia and a small femoral hernia on the left side. There were symptoms of strangulation on the left side, which was accordingly operated on. The bowel was set free and reduced and the sac twisted and fixed by Ball's method. The wall of the sac was in a condition of mucoid degeneration very like the inner wall of an ovarian cyst. The patient left the infirmary well, but he cannot be traced.

CASE 10.—A man aged forty-five years, with right oblique hernia of immense size; with difficulty the bowels were reduced after opening the sac. The neck of the sac was twisted in Ball's way. Operation was performed on May 11th, 1893. At present there is a very slight (walnut-sized) bubonocele at the internal ring. The patient wears a light truss.

CASE 11.—A boy aged three years, with right congenital inguinal hernia. Operation was performed on May 18th, 1893, by Buchanan's method. There was no return.

CASE 12.—A man aged thirty-two years, with right congenital inguinal hernia. Operation was performed on June 3rd, 1893. A large portion of omentum was removed and the ring and canal were sutured. There was no return.

CASE 13.—A boy aged eighteen months, with strangulated left inguinal hernia, congenital. Operation was performed on Aug. 15th, 1893. There was no return.

CASE 14.—A man aged thirty-one years, with direct inguinal right hernia. Operation was performed on Sept. 14th, 1893. The sac was removed and the ring sutured. There was no return.

CASE 15.—A boy aged nine years, with left congenital hernia. Operation was performed in October, 1893 (by Buchanan's method). An undeveloped testicle was found in the canal, but was not removed. The hernia returned.

CASE 16.—Operation on the preceding case was repeated, Dec. 2nd, 1893, and the testicle was removed. There was no return.

CASE 17.—A man aged fifty-five years, with double oblique inguinal hernia. The right side was operated on on Oct. 12th, 1893, by O'Hara's method.

CASE 18.—This is the same patient as the preceding case. The left side was operated on on Oct. 26th, 1893, by Macewen's method. There was no return on the right side, but there was a slight bubonocele on the left side, for which he wears a light truss. These hernias were both large, dragging the tissues to such a degree that the penis was entirely hidden, a puckering of the skin alone showing its position.

CASE 19.—A man aged twenty-four years, with right oblique inguinal hernia of seven years' duration. Operation was performed on Nov. 23rd, 1893 (by Macewen's method). There was no return.

CASE 20.—A man aged forty-nine years, with a small right inguinal hernia. Operation was performed (by Macewen's method) on April 14th, 1894. There was no return.

CASE 21.—A woman aged thirty-six years, with right femoral hernia. Operation was performed on April 15th, 1894 (by O'Hara's method). No trace can be found of her.

CASE 22.—A man aged thirty-three years, with, right inguinal hernia, congenital. Operation was performed on April 19th, 1894 (by Buchanan's method). The hernia returned a year after.

CASE 23.—A man aged thirty years, with right inguinal hernia. Operation was performed on May 3rd, 1894 (by O'Hara's method). There was no return.

CASE 24.—A man aged fifty-five years, with large left inguinal hernia; large ring. Operation was performed on June 7th, 1894. Ball's method was adopted. There was no return.

CASE 25.—A man aged fifty-four years, with right inguinal hernia of large size. Operation was performed on Aug. 16th, 1894. Ball's method was adopted. There was no return.

CASE 26.—A woman with abdominal hernia at the cicatrix of a wound due to injury two years before. The cicatricial tissue was removed and the parts were brought together. Her condition has much improved, though it is not perfect.

CASE 27.—A woman aged twenty-one years, with left labial hernia. The sac was removed after ligaturing the neck high up and closing the wound made with deep sutures. Operation was performed on Sept. 25th, 1894. There was no return.

CASE 28.—A boy aged two years, with left congenital hernia. Operation was performed on Sept. 27th, 1894 (by Macewen's method). The hernia returned during a severe attack of bronchitis in February, 1895.

CASE 29.—A boy aged one year and ten months, with congenital inguinal hernia on both sides. The right side was operated on on Oct. 13th, 1894, and the left side on Oct. 20th, 1894 (by Macewen's method). Both hernias remain up.

CASES 31 and 32.—A boy aged four years, with congenital inguinal hernia on both sides. Operation was performed on both sides on Nov. 29th, 1894. On Dec. 5th a scarlatinal rash appeared and the patient was sent to the Belvidere Fever Hospital, where one of the wounds went wrong, the hernia returning. Early this year operation was performed for a second time with success so far.

CASE 33.—A boy aged eight years, with congenital inguinal hernia on the left side. Operation was performed on Dec. 20th, 1894, by Macewen's method. The patient still remains well.

CASE 34.—A boy aged fourteen years, with right inguinal hernia (congenital). Operation was performed on Jan. 24th, 1895 (by Macewen's method). The patient is still well.

CASE 35.—A boy aged fifteen months, with congenital left inguinal hernia. Operation was performed on Jan. 14th, 1895 (by Macewen's method). There was no return.

CASE 36.—A girl aged five years, with inguinal hernia in the left labium. The neck of the sac was ligatured and the canal closed. There was no return.

As the notes bear out, various forms of the operation have been tried and my present position regarding this procedure is as follows. Where the sac of the hernia is small or moderate in size—not longer than three inches—I find that Macewen's operation gives most satisfactory results. In large hernias the bulk of the sac forbids the employment of this method, and I use instead that of Ball or O'Hara. In the former the twisting of the sac-neck firmly and ligaturing as high up as possible, and thereafter using the stump as a plug to close the abnormally large ring, has been followed by fairly satisfactory results. When a year or two has elapsed a small-sized bubonocele will likely return, but it is quite easily dealt with by means of a light-springed truss, and though the cure is not perfect it is a vast improvement on the condition previous to the operation. The second method, that employed by O'Hara of Melbourne, has yielded good results in my hands. I have tried it in five cases with success. The problem presenting itself is how to dispose of the neck of the sac without leaving it where it will invite the re-formation of a hernia. If the neck of the sac is left ligatured just within the internal ring the puckering folds of the peritoneum all concentrate towards where the ligature has been applied, and this puckering guides the intestines to this particular spot, which is weak by its very situation. Professor Macewen has met this difficulty by placing the folded-up sac as a buttress to strengthen this weak point just within the internal ring. O'Hara met the same difficulty by ligaturing the neck of the sac high up leaving the ends of his catgut suture long, the fore-finger of the hand is passed up through the internal ring separating the peritoneum from the overlying structures, and when the finger is nearly its full length in the abdominal wall the finger-tip is bent so as to mark its position. A slight transverse incision is then made over the projecting finger-tip, just going through the skin proper. The ends of the ligature are then passed up threaded on a straight or slightly curved blunt needle along the sides of the finger successively, and brought out, one through the one end of the cutaneous incision and the other through the other end. The ligatures then are unthreaded, and by a steady pull on them the neck and stump of the sac are drawn upwards and fixed there by tying the ends of the ligatures firmly. The peritoneal bag referred to is by this manœuvre transferred to a position behind the rectus muscle, where a hernia has an infinitesimal chance of forming. The ring is then sutured and deep stitches inserted to draw the canal together, of course guarding the cord carefully.

It is somewhat curious that Dr. Buchanan in his operation should have foreshadowed the later and theoretically more nearly perfect operation of his now colleague, Dr. Macewen. Dr. Buchanan cut a portion of the sac of congenital hernia and rolling it up inserted this portion as a plug in the internal ring. Had he pushed it within the ring, fixed it there, and sutured the ring over it, the operation would to all intents and purposes have been the later operation of Dr. Macewen.

Regarding the details of operation the material I use for ligaturing is silk, and for suturing, silver wire or salmon gut indifferently. Silk when well prepared and kept aseptic does quite well, but in children the liability to infection through contact of the urine is very great, and latterly in them I prefer to use catgut, which seems not so liable to become septic. One point to be observed is not to close the wound till all hæmorrhage has ceased, because the laxity of the tissues is such as to encourage reactionary bleeding when the wound is closed up and the patient comfortably warm in bed. Drainage is amply provided for by a few strands of twisted catgut inserted at the more dependent part of the incision. While in such a case as excision of the breast there is slight call for a drain, owing to this reactionary hæmorrhage in the part affected, I think it safer always to provide by drainage for the abnormally large discharge that may occur. In every case the limb on the affected side is fixed on a long splint and the dressings applied in such a way as to admit of their removal without interfering with the splint. In children under six years of age the St. Andrew's Cross splint is applied. The patient is kept in bed for six weeks if all goes well; he is then sent out with a light-springed truss fitted on, to report himself from time to time.

One or two additional points call for remark. In one case I came on a sac which was old, with its outer surface as hard as wash-leather, and on its inner surface there was a thick-walled mass of colloid material, yellow and soft, exactly what is met with in the inner wall of an ovarian cyst. Two cases, one of which is reported above, had such cyst walls and relations to contents as to compel me now always to open the sac before proceeding further in the operation. In the first case, that reported as No. 9, the contents of the sac were small intestines and omentum, the former of which could be quite sensibly replaced, the latter seemingly; yet when the sac was opened it was found that the omentum, though to the sense of touch all replaced, was anchored to the very bottom of the sac by four or five long, thin, firm strands of strong connective tissue. These were severed between ligatures and the sac completely emptied before proceeding to fold up the sac curtain-wise. The second case was much more exceptional. In a large hernia the sac was freely exposed, not without difficulty owing to inflammatory adhesions to the testicle and cord-tissues, and the contents were reduced. The contents seemed all to be reduced leaving a large and thick sac, which is frequent in old hernias. On carefully dissecting further it was with surprise that I found an extremely thin sac proper, but that what I had taken to be the sac was in great part formed by coils of small intestine which had become by repeated local inflammatory attacks part and parcel of the sac wall, and that what had been reduced had been other portions of the intestine which had come down long subsequent to the adherent parts. Considering the man's age (which was sixty-three years), the size of the ring, and the risk in severing the adherent bowel of such length from its adhesions, I decided to go no further in my attempt at the radical cure.

Glasgow.

METACHROMATISM IN DIPHTHERIA BACILLI.

BY A. A. KANTHACK, M.D. LOND.,
LECTURER ON PATHOLOGY, ST. BARTHOLOMEW'S HOSPITAL.

IN THE LANCET of Aug. 15th, p. 458, there was a short note by Dr. Gossage on the Influence of Glycerine in Culture Media on the Diphtheria Bacillus. He imagines that the glycerine is responsible for a curious metachromatic affinity towards methylene blue, and he is bold enough to consider the metachromatism as a distinctive test between the Klebs-Löffler bacillus and the numerous organisms resembling it. He evidently does not understand the meaning of this phenomenon and seems to think that on ordinary media

only "some of the bacilli" show metachromatism. This is erroneous, for after having worked with diphtheria bacilli daily for almost two years I can assure him that this striking reaction may be got with the Klebs-Löffler bacilli grown on and in media containing not a trace of glycerine. In 1889 already Babes[1] described metachromatism in diphtheria bacilli, and showed that it occurs in numerous other organisms, and this has been well known since then. Metachromatism apparently depends on what Fischer[2] calls "plasmolysis," and may be produced in many ways, and no doubt glycerine is strongly plasmolytic; salt and sugar solutions, however, will produce the same effect. But does Dr. Gossage really wish to persuade us that this reaction with methylene blue is so characteristic as to enable the merest tyro to distinguish the Klebs-Löffler bacillus from those that resemble it? This is a dangerous statement, and being incorrect cannot be allowed to pass without contradiction. Having described the metachromatism in diphtheria bacilli Babes mentions the same phenomenon as occurring with Ernst's xerosis bacillus, Fick's bacillus of the normal conjunctiva, and his own trachoma bacillus, all bacilli morphologically closely resembling the Klebs-Löffler organism. And this was in 1889. His pictures can be seen in the *Zeitschrift für Hygiene* for that year, and in 1895 he once more alludes to and pictures metachromatism in both true and false diphtheria bacilli.[3] Other observers have also described it often enough in many forms of organisms resembling the diphtheria bacillus, and it can be constantly observed and easily produced. If the addition of glycerine in large quantities is likely to render the recognition of the Klebs-Löffler bacillus more speedy and more certain let the tyro not pin his faith on metachromatism. I have never used any other medium than serum or the Kanthack-Stephens medium—which, by the way, has not yet disappointed me—and continually observe metachromatism, sometimes in almost every bacillus on the cover-glass, sometimes in a few in each field, in false diphtheria bacilli as much and as little as in true ones. After some experience and after passing through the stage of dogmatism I have now reached the stage of scepticism, and do not allow that there is a single morphological or biological character, a single chemical or staining reaction of absolute and specific value, which will enable us to say with certainty that a bacillus resembling the Klebs-Löffler bacillus is or is not the true bacillus, that is, assuming that we are not biased by the clinical knowledge of the cases. Such being my belief, I have ventured to protect the tyro from a misconception, warning him against a test which depends on a phenomenon which may be produced with almost any organism in the presence of simple chemical substances. However characteristic metachromatism is—and, indeed, it is striking—it is not characteristic of the true diphtheria bacillus as compared with the false one; hence as a diagnostic test it is valueless.

St. Bartholomew's Hospital.

[1] Zeitschrift für Hygiene, 1889, vol. v., pp. 177-181 (see also drawings).
[2] Untersuchungen über Bakterien: Jahrbücher für Wissenschaftliche Botanik, Band xxvii., 1.
[3] Zeitschrift für Hygiene, 1895, vol. xx., p. 412 (see also drawings).

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

DEAF-MUTISM AND GOITRE.

BY VAUGHAN PENDRED, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE HOUSE SURGEON TO GUY'S HOSPITAL.

THE curious association of deaf-mutism and goitre occuring in two members of a large family has induced me to record these cases. Why this association? Perhaps some readers of THE LANCET may be able to throw some light on the cause of this combination of diseases: Absence of thyroid—cretinism; overgrowth of thyroid—deaf-mutism. I append the family history as recounted to me by the mother. The family is an Irish one, and the parents have been upwards of forty years resident in Durham. The father, aged sixty-six years, and the mother, aged sixty-seven years, are alive and healthy. They have had ten children, five sons and five daughters. In an epidemic of small-pox twenty-five years ago the whole family was attacked with the exception of the younger of the deaf-mutes, and four males and one female died, although all had been vaccinated, and that recently, as they were children. The remaining son and two of the daughters are healthy and vigorous. The first goitre case is the first-born of the family—a spare woman now aged thirty-eight years. She is deaf and can only mumble indistinctly; little care has been taken to educate her and so she is imbecile. The goitre is a large multilobular hard tumour, the greater part on the right side of the neck; from time to time she suffers from dyspnœic attacks. The growth was first observed after the small-pox—i.e., at thirteen years of age. The second surviving girl is now aged twenty-eight years, and is the fifth of the family; she is a small, spare, intelligent woman, her expression being in marked contrast to her sister's. She is not absolutely deaf and can mumble incoherently; her education has been attended to with so much success that she has been "in service." The tumour is larger than in the other case, but is of the same character; it has been growing for about fifteen years, and during the last year has caused both dyspnœa and dysphagia, which have become so urgent that I have sent her to-day to Newcastle Infirmary for operation.

Durham.

TEMPORARY ARREST IN THE GROWTH OF FINGER NAILS FOLLOWING COLLES' FRACTURE.

BY T. H. DAVISON, M.B., C.M. EDIN., D.P.H. CAMB.

ON Feb. 13th a fireman whilst at drill fell a distance of ten feet and fractured the end of his left radius. I treated the fracture with a pistol splint, the result being most satisfactory. Six weeks after the accident the patient noticed a transverse groove across the nails of the fingers only, that of the thumb being quite natural. The grooves have now nearly grown out with the growth of the nails. Why should the nail of the thumb have escaped? I have seen a considerable number of Colles' fractures, but have never observed a similar condition of things.

Brondesbury-road, N.W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

TWO CASES OF PULMONARY ABSCESS TREATED BY OPERATION; REMARKS.

(Under the care of Dr. FREDERICK J. SMITH and Mr. FREDERICK TREVES.)

PULMONARY surgery has developed considerably during the last few years, along with other branches of special surgical procedures, but it has not yet become so common or so successful that the publication of individual cases has ceased to be of interest, and the following examples are therefore brought forward and are deserving of particular attention. Without the aid of the surgeon there can be little doubt but that these patients would have ultimately died, but there can be no doubt also that but for the careful and accurate diagnosis made beforehand such assistance would not have been rendered. From the small size of the cavities the physical signs were but slight, yet they were correctly localised. The operation in each was facilitated by the presence of adhesions of the pleura over the area of lung affected. Fenger and Hollister reported 6 cases, 1 of which recovered. Runeberg collected 11 cases of abscess of the lung for which the operation of pneumotomy was performed; 2 recovered, and in 3 the diagnosis was doubtful.

In the 3 fatal cases death could not be attributed to the operation. M. Poirier collected the following statistics: of 25 cases of incision of tuberculous cavities, with resection of ribs, improvement took place in 15, cure resulted in 4, in 9 the result was negative, and in 1 it was unknown. In 19 of the cases the disease was situated in the apex.

CASE 1.—A man aged about fifty years was admitted to the hospital, under the care of Dr. F. J. Smith, with the following history. Up to October, 1895, he was perfectly well—in fact, he boasted of never having had a day's illness in his life; on Oct. 12th while at work and in his usual health he was suddenly seized with a severe pain in the right chest—he was cleaning a window and noticed that his right arm seemed at the same time to get weak. He went home and rested, and some three or four days later he perceived that his breath had become very offensive and a cough developed at the same time with very fœtid expectoration; the very foul smell made him feel sick, but otherwise either then or since has he complained of nothing in the way of special symptoms. Dr. Lawrence of Custom House sent him up to Dr. Smith at this time to see what could be done for him. On examination of his chest in the out-patient department Dr. Smith was very much puzzled as to the cause of his trouble; inspection, palpation, and auscultation revealed absolutely no pathological sign anywhere, and on percussion it was difficult to believe that the slight dulness of note opposite the middle of the right scapula was really of any import. Dr. Smith accordingly ordered the inhalation of a few drops of the following mixture several times a day—viz., one drachm of creasote, two drachms of carbolic acid, three drachms of tincture of iodine, and rectified spirit of wine to one ounce. The fœtor improved at first and the patient experienced considerable relief, but in two or three weeks it was as bad as ever and he began to feel ill with the horrible smell. Dr. Smith saw him again and admitted him on Dec. 12th and repeatedly examined the chest. The following were the physical signs revealed by a systematic examination. By inspection the result was *nil*. On palpation, by persistent digging in of the finger, Dr. Smith was able to find a spot about the size of half a crown between the border of the right scapula and the vertebral spines opposite the middle of the scapula where pressure caused slight pain, or at least a different sensation from that experienced when a similar manœuvre was practised on the other side. This spot was that at which he had originally complained of pain passing from the front of the chest. On percussion slight dulness was detected over the same areas, but this was appreciable only on repeated trials. On auscultation there were heard distant breath-sounds, which were less audible and yet more distinct than on the other side; the voice sounds were similarly affected, but nothing was noted that could be called bronchophony or pectoriloquy, and there were no adventitious sounds; in fact, the chief point was a comparative absence of natural sounds. On Dec. 16th the house physician passed in a grooved needle, but failed to reach either pus or fœtid material. The patient was quite willing to undergo any operation that offered a chance of relief from his most unpleasant symptoms, and accordingly Mr. Treves was asked to cut down on the spot and let out the pus. Dr. Smith's diagnosis was exactly verified at the operation; a very localised pleuritic adhesion was found at the spot indicated, with a small abscess cavity beneath it about the size of a walnut containing most offensive pus. The patient did remarkably well for some months, the fœtor disappearing and the patient feeling well. A return of the trouble necessitated, however, a second operation at the old site, and since then the patient has made an uninterrupted recovery and is now back at his old work. The surgical procedure and treatment are dealt with in the remarks by Mr. Treves and also the second operation which took place in February, 1896.

CASE 2.—A man aged forty-five years was admitted to hospital under the care of Dr. Smith on May 14th, 1896. He was sent up by Dr. Walker of Leytonstone. His history was as follows. About three weeks after Christmas, 1895, he had what seemed to be rheumatism and in a short time noticed that he had lost his taste, while his wife complained of the foul smell of his breath. He had a slight cough, but otherwise complained of nothing; there was no pain or tenderness, and only slight shortness of breath; he lost flesh, however, rather rapidly. From then till his admission he seemed steadily to lose ground from the fœtor and consequent malaise, and it was feared that malignant disease was at the bottom of the trouble. On admission Dr. Smith observed the following physical signs in the chest. Inspection revealed nothing; on palpation there was diminished tactile vocal fremitus all over; on percussion there were noted slight comparative dulness and increased resistance to the finger in the right axilla and posteriorly about the inferior angle of the right scapula (Dr. Smith termed it a "woodeny note" over this area); the left side seemed to be natural in note. Auscultation revealed that throughout the right lung behind the breath sounds were harsher than on the left side and more clearly conducted to the ear, but nowhere distinctly tubular: at the lower part of the scapular region and just below its angle these harsh sounds were associated with rather fine moist crepitations, which were not heard on the left side, and expiration became almost tubular in character. In front a similar distinction was to be made out between the two lungs, but it seemed as though the right abnormal sounds were transmitted through healthy lung, indicating that the mischief lay posteriorly. With the experience of Case 1 fresh in Dr. Smith's mind no time was wasted with useless drugs, but Mr. Treves was immediately asked to operate. The operation is described below. The patient has regained the flesh he had lost and his breath is free from odour; he is now, August, 1896, out of hospital and quite well.

Remarks by Mr. TREVES.—The surgical procedure adopted in the above-mentioned cases was the following: A large triangular-shaped flap, with the base uppermost, was fashioned from the soft parts over the site of the lesion in the lung. The exposed portions of the ribs laid bare were removed subperiosteally and the intercostal tissues and the pleura were divided. In Case 1 the parietal and visceral layers of the pleura were adherent; an incision was made directly into the lung beneath and exceedingly offensive pus at once let out. The incision into the lung was enlarged until the abscess cavity was well exposed. Its walls were then scraped and dried and the whole infected space stuffed with iodoform gauze. An opening was made in the centre of the integumentary flap and through this the end of the gauze plug was drawn. The pleural cavity below was made evident during the operation; the bleeding was trifling and very easily controlled. The flap was fixed in position by sutures and the abscess cavity, irrigated daily, was dried out and then stuffed with gauze through the hole made in the flap. The after-treatment presented no difficulty of any kind and healing was speedy and uninterrupted. There was some return of the pulmonary symptoms, and at Dr. Smith's request I again exposed the affected part of the lung. I discovered the old abscess cavity to be entirely obliterated. The healing was sound and there was no trace of either pus or granulation tissue. In Case 2 I exposed the pleura by turning up a like flap of the soft parts. As in both instances the operation was carried out in the gap between the scapula and the spine the flaps in these cases were very substantial. In the present instance I found the pleura much thickened, but I then plugged it at the margin of the wound with a tampon of iodoform gauze in such a way that a circular patch only of the lung was left exposed. It was freely divided. I introduced a trocar into the exposed lung thus isolated as to its surface. No pus escaped. I then proceeded to incise the lung, and although the incision was ultimately carried for more than one inch in depth through apparently healthy lung tissue the bleeding was comparatively insignificant. I finally reached the abscess cavity, which was the size of a cricket ball. A free opening was made down to it through the lung and the actual section of lung tissue made when the operation was completed was quite considerable. The abscess cavity was scraped, dried, and very firmly stuffed with iodoform gauze. There was no trouble from bleeding, which was at once arrested by the plug. The tampon was removed from the pleural cavity and the flap adjusted as before. No attempt was made to shut off the pleural cavity by sutures. With efficient gauze drainage of the suppurating area such exclusion is unnecessary. The lung cavity was plugged daily. The original plug was left undisturbed for four days. This case healed even more readily than the first. It is evident that lung abscesses, or rather certain lung abscesses, can be treated in precisely the same manner as are suppurative collections in more accessible parts, and that an extensive incision can be made in the periphery of the lung without trouble from hæmorrhage.

Remarks by Dr. SMITH.—For the eminently satisfactory

termination of these two cases I feel I am deeply indebted to Mr. Treves, who loyally accepted my diagnosis and operated promptly on the strength of my opinion. The grounds on which I based my diagnosis are worthy of some little discussion. Both the cases presented the same fundamental symptom—namely, excessive fœtor of breath, from which and its consequences they urgently desired relief. This symptom may be caused, firstly, by disease in the alimentary tract, but neither patient gave us any grounds to suspect this source; and, secondly, by trouble in the lungs and air passages, and it was evident in both cases that the mischief lay here. The conditions of the respiratory organs likely to cause it may be enumerated as: (1) malignant ulceration of the larynx; (2) spreading gangrene of the lungs; (3) stinking empyema which has burst into a bronchus; (4) bronchiectasis; and (5) local necrosis with suppuration or abscess of the lung. (1) There was no evidence of this; (2) this could be excluded by the comparatively healthy appearance of the patients taken in conjunction with the duration of illness, which was far too long not to have produced much more profound cachexia had spreading gangrene been present; (3) I excluded by the absence of the ordinary signs of pleuritic effusion as well as of those of pneumo-thorax; (4) bronchiectasis is, I suppose, the commonest cause of fœtid expectoration, but to get that there must, I think, be a history of some previous disease of the lung, possibly pneumonia, but of course far more probably chronic bronchitis; now all such indications were conspicuous by their absence and I was thus easily led to believe that I had a single source of fœtor to deal with, and not multiple bronchiectases. Once this conclusion was reached by sound argument the only remaining factor is to get a surgeon who will operate, for I do not think that any drug is capable of bringing about the closure of a stinking cavity which, by its situation and circumstances, breaks through the golden rule of surgical principles based on ascertained fact—viz., to secure the healing of a foul abscess free drainage is a *sine qua non*.

DEVON AND EXETER HOSPITAL.

TWO UNUSUAL CASES OF GALL-STONES, WITH CHOLECYSTOTOMY.

(Under the care of Mr. A. C. ROPER.)

THE following cases are examples of unusual conditions associated with gall-stones. The first case, in which the symptoms resembled intussusception, will attract most attention, but the second case is of interest. The more important points of each are shown by Mr. Roper in his remarks.

CASE 1.—A woman aged forty-seven years was admitted into the Devon and Exeter Hospital on May 16th, 1895. She was a married hard-working woman who had had thirteen children, but no previous serious illness or similar attack. The patient had been suffering great pain in her abdomen, accompanied by vomiting for three days, and had taken various aperients resulting in one action of the bowels the previous morning, which, however, did not give her any relief. An enema of seven pints administered on the night preceding her admission to hospital was returned unstained. Her temperature was 99° F. and the pulse was 100. The patient vomited green bile and mucus. Examination of the abdomen showed a visible swelling, which was freely movable, somewhat tender, elastic, and distinctly resonant to percussion, and situated down the right side of the abdomen, extending from just below and two inches to the right of the umbilicus up to the margin of the ninth costal cartilage, from which point resistance extended across the abdomen along the line of the transverse colon. The swelling appeared to be like a large sausage in shape. A diagnosis of intussusception was arrived at, and under chloroform Mr. Roper made an incision in the middle line, and on opening the peritoneum found a red, inflamed, sausage-shaped tumour, which proved to be the gall-bladder greatly distended and elongated and adherent on its posterior surface to the intestines. Excepting collapse of the large intestine on the distal side of the tumour nothing abnormal was discovered in the intestines. The gall-bladder was very tense and no stones could be felt in it. It was stitched to the wound and drained through a large trocar of a quantity of thick dark-green bile. On the third day the trocar was exchanged for a rubber drainage-tube and then, as well as at the time of operation, a probe passed well in failed to detect gallstones. Bile continued to escape by the drainage-tube for about a week, when the tube was withdrawn and the wound apparently closed. On the 25th the bowels had acted regularly since the operation, but the patient had cystitis from catheterism. On the 30th about an ounce of pus escaped apparently from an abscess in the abdominal wall. On June 4th the small sinus was still discharging, but had it not been for the cystitis the patient could have got up. Mr. Roper went for his holiday and on his return on July 1st the house surgeon (Mr. H. Andrew) reported that after the patient had been up he had detected gallstones with a probe. The patient being anæsthetised the wound was re-opened and an ounce of mucus unstained by bile evacuated with seventeen gall-stones, weighing in all seven drachms. Three large ones weighed over 100 grains each. A large one was with difficulty removed from the gall-duct and its removal was followed by a rush of yellow bile, the first which had been seen, from the wound. The wound healed rapidly and the patient was soon discharged recovered and has since remained in good health.

CASE 2.—A woman aged thirty-six years was admitted on Nov. 7th, 1895, under the care of Dr. Blomfield, with a history of several attacks of gall-stone colic. On the 13th she had an attack, accompanied by sickness and jaundice, and gall-stones had at various times been found in the motions. On the 27th the patient was placed under chloroform and Mr. Roper made an incision three inches long down from the ninth costal cartilage. The liver was found to be enlarged and extended nearly to the umbilicus, but on turning it up the gall-bladder was easily found, not much distended, but containing many stones. The wound was packed with sponges and the gall-bladder was opened. Viscid mucus was first evacuated, then twenty-three small stones, and when the duct was cleared of stones yellow bile came away. The peritoneum and skin were sutured together, the gall-bladder was attached to them and the upper and lower parts of the wound were closed, a drainage-tube being left in the gall-bladder. The patient suffered a good deal of pain for forty-eight hours after the operation. On Dec. 1st the drainage-tube was removed and the probe detected no stones. On the 2nd five gall-stones were found in a motion; on the 4th two were found; on the 6th nine more; on the 7th twenty-three; on the 10th one; and on the 19th three gall-stones were found in the motions. On the 21st one stone was passed through the wound, and on the 23rd two stones and on the 27th two more were found in the motions. On the 28th the opening into the gall-bladder was dilated with a laminaria tent as a stone was felt with the probe, but the use of the forceps and syringing failed to remove it. On the 29th a stone was passed and on Jan. 8th, 1896, another, both through the wound. All the stones were small. The sinus speedily healed after this and the patient was discharged as cured. The patient has been seen since, when she said she was in excellent health.

Remarks by Mr. ROPER.—The interesting feature of Case 1 is the striking resemblance which it bore to intussusception. I had no doubt that this condition obtained, and several of my colleagues who saw the case confirmed my diagnosis, which seemed, indeed, to be perfectly obvious. There is no doubt that the distended gall-bladder adherent to the colon kinked it and caused the obstruction. The tympanitic note produced by percussion over the tumour is only another instance of the unreliableness of this physical sign in abdominal cases. In the latter case the passage of forty-seven gall-stones by the rectum after the operation is curious. The unusual amount of pain for several hours after the operation may have been caused by my pushing one or two stones into the duct when I emptied the gall-bladder, although the patient did not recognise the pain as that of the gall-stone colic, of which she had such ample experience. The stones may have been evacuated from the liver, or have been lying in the intestine, or may have been lying in a dilated common bile-duct. There seems to be no adequate reason for accepting the first hypothesis, and it is improbable that so many as twenty-three stones would have passed at one time and painlessly. The second is improbable, as the patient had been for three weeks in hospital under the care of Dr. Blomfield and her bowels had been kept rather freely opened. I am inclined therefore to consider the last the probable explanation. Both

cases had cystitis, which I have not found a by any means common feature in my female patients who have required the use of the catheter; and I know that in the second case especial care was taken to avoid this trouble.

Reviews and Notices of Books.

An American Text-book of Surgery for Practitioners and Students. Edited by W. W. KEEN, M.D., LL.D., and J. W. WHITE, M.D., Ph.D. Second edition. Philadelphia: W. B. Saunders, 925, Walnut-street. London: The Rebman Publishing Company, Ltd, 11, Adam-street, Strand. Price 40*s*

THIS work has been produced by a number of the most eminent surgeons in the United States of America. The plan pursued differs from that usually adopted in this country, so that there is more continuity in the text. As we pointed out in our review of the first edition, the authors have not put their names to the articles which they have written and no indication is given of the share of each contributor. We are also assured that the entire book has been submitted in proof sheets to all of the authors for criticism and revision. This arrangement has resulted in a unity of plan and continuity of style which are not met with in some of our systems of surgery. The present edition has been enlarged to cope with the advances which have taken place in surgery, and amongst other subjects there are now additions to the text which include the effect of modern small-arms; a new section on acromegaly; the Hartley-Krause method of removing the Gasserian ganglion; the osteoplastic method of resection of the skull, with a number of additions to operations and methods in endocranial and spinal surgery; in the surgery of the chest, a description of Schede's operation; in the surgery of the digestive tract, Witzel's method of gastrostomy; the use of Murphy's button in intestinal anastomosis; the consideration of retro-peritoneal tumours and of castration for enlarged prostate; a chapter on symphysiotomy; Macewen's method of compressing the aorta in amputation at the hip-joint, &c. The sections dealing with fractures and dislocations, appendicitis, the radical cure of hernia, and the more recent methods in amputation of the breast have been especially enlarged, particularly in the matter of treatment. Displacements of the uterus have also been re-grouped and the chapter has been largely re-written. The number of illustrations is a feature of the work, and most of them are of considerable value; some of the old ones have been withdrawn, but there are still some remaining which do not do credit to the work—Plate VI., Figs. 61. 85, 170, and 173 may be mentioned. Fig. 300, giving the different levels of resection of the sacrum, should be enlarged, as it is impossible at present to follow the lines which it is intended to show. A change of which we heartily approve is the removal of the names of surgical instrument makers from the cuts, their names being published in a separate list at the end of the index. The work possesses a very high order of merit and appears to have met with a deserved success in the United States of America as a text-book. We think, however, that it will be best appreciated by those who already possess some knowledge of surgery.

Manual of Midwifery for the Use of Students and Practitioners By W. E. FOTHERGILL, M.A., B.Sc., M.B., C.M. Edin., Buchanan Scholar in Midwifery, University of Edinburgh, &c. With double coloured plate and sixty-nine illustrations in the text. Edinburgh: William F. Clay. New York: Macmillan and Co. 1896. Price 10*s*. 6*d*.

As the author truly observes, the Edinburgh school has always been active in the department of obstetrics. His aim in writing the work before us has been to produce a short but systematic re-statement of the science and art of midwifery which should contain as many as possible of the facts and theories more especially taught in the Edinburgh school that are not to be found in the text-books commonly used. The book is primarily a book for Edinburgh men by an Edinburgh man, but the hope expressed that it may be found useful to members of other schools appears to us to reasonable and well-founded.

We take exception, however, to the position of the uterus shown in Fig. 1 representing a sagittal section of the pelvic organs. The axis of the cervix and that of the body of the uterus lie there in one straight line at right angles to the pelvic brim, and there is considerable space figured as existing between the anterior surface of the uterus and the bladder, although this organ is supposed to be empty. This is contrary to the teaching of Dr. Hart and Dr. Barbour, and, indeed, at variance with the author's own description: "The uterus lies on the bladder in front." We should not call attention to this were it not that the author makes it a great point that figures should represent things as they have been observed to be and not as they may be imagined to be. In the preface he says: "I have entirely excluded the usual diagrams of attitudes and movements which have never been observed and which owe their origin as well as their depiction to imagination." The description of the bones forming the pelvis, commonly found in manuals of midwifery, has been omitted no doubt on the ground that instruction on that part of the subject is to be found in text-books of anatomy. At the same time, however, we observe that Chapter I. is devoted to an account of the Structure of the Female Reproductive Organs. We think, on the whole, it is well to include some account of the anatomy required in order to understand what follows in a text-book of midwifery, both the anatomy of the soft parts and of the bones. The author can easily do so, if he sees fit, in preparing the second edition, which we have no doubt will be required. The use of the word "function" as a verb, and of "connective" as a substantive, is decidedly unpleasant to a fastidious ear, and not to be justified by any sort of scientific licence. Moreover, we find "mucous" several times for "mucus," and also read that "the uterus may be double, opening into the vagina by separate *ossa*"! The italics are ours. These are blemishes which disfigure the book and tend to produce an unfavourable impression as to its accuracy in other respects. This is unfortunate, because, speaking of the book as a whole, we think it is an excellent text-book for students, well arranged and illustrated, and that it is distinguished in many parts by a freshness of treatment that is especially welcome when met with in relation to so well-worn a theme.

Die Syringomyelie. Von Dr. HERMANN SCHLESINGER. Leipzig and Vienna: Franz Deuticke. 1895.

THIS monograph by Dr. Schlesinger on a condition which, clinically at least, has only been comparatively recently recognised is the most complete that has yet appeared. It consists of two parts—a systematic description of the condition, both clinical and pathological, and a record of cases, together with a complete bibliography. The systematic part consists of an introduction, followed by an account of symptoms—motor, sensory, and trophic. The disease is then described under five leading types: (1) the classical type, (2) the type in which motor symptoms are predominant, (3) that in which sensory symptoms are most marked, (4) that in which trophic disturbance is the prominent feature, and (5) the so-called tabetic type. Sections are then devoted to differential diagnosis, etiology, course, and treatment, and to the pathological anatomy. The work forms a most valuable contribution to neurology,

and it is so complete and takes account of such diverse and multiform conditions that we venture to think the author has gone as far in the unravelling of this strange condition as anyone can go at present. It is impossible in a notice like this to do more than direct attention to the salient features of what will, we believe, remain for long the authoritative work on the subject with which it deals.

LIBRARY TABLE.

Invalid Feeding, with Hints on Diet in Various States of Ill-health. By FLORENCE STACPOOLE, Lecturer to the National Health Society. London: Walter Scott, Limited. Pp. 129. Price 6*d*.—This little book is well-stored with useful practical information as to the selection and preparation of food for invalids and convalescents. It has an instructive chapter, in simple language, on predigestion either with peptonising powders or with malt infusion, and can be recommended not only to nurses and heads of families but also to the general reader.

The Urine in Health and Disease, together with its Chemical Examination. By H. AUBREY HUSBAND, M.B., B.Sc., F.R.C.S. Edin. Third edition. Edinburgh: E. and S. Livingstone. 1895. Price 1*s*.—Dr. Husband's little book deserves high commendation as a concise summary of the chemical examination of the urine. By skilful condensation and by assuming the reader to possess a moderate acquaintance with chemical manipulations he has brought into small compass a large amount of information, including five quantitative methods for sugar and an account of the diazo reaction given by the urine in enteric fever. Among so much that is well done the author should not have permitted such an obvious slip as "chlorides of soda and potash" among the urinary constituents. In the volumetric estimation of chlorine with silver nitrate and potassium chromate some chemists would dilute the sample of urine much more freely than is here directed and would prefer a weaker silver solution. There are twenty-four illustrations of the microscopic appearances of sediments.

Atlas der Pathologischen Histologie des Nervensystems. Redigirt von Dr. VICTOR BABES. V. Lieferung. Berlin: Verlag von August Hirschwald. (*Atlas of the Pathological Histology of the Nervous System.* Edited by Dr. VICTOR BABES. Part V. Berlin: August Hirschwald.) 1896.—This volume of an extremely useful work is devoted to Lesions of the Posterior Tracts of the Cord of Extrinsic Origin. The illustrations consist of ten photogravure reproductions of photo-micrographs of specimens chiefly stained by the Weigert Pal method. These plates are among the most perfect specimens that we have seen, not only as regards their beauty as illustrations, but in regard also to the pathological points which they show and the extremely beautiful manner in which the specimens, of which they are illustrations, have been prepared. Each plate is accompanied by a short descriptive letterpress from the pen of Dr. Marinesco, and the volume altogether forms one of the most interesting and most instructive, as well as one of the most artistic, that we have seen. The authors are to be congratulated on their work, and Dr. Marinesco especially on his introduction and explanatory letterpress, which are very succinct and to the point.

The omnipresent cycle is to have, or rather has got, a literature of its own. Messrs. Chapman and Hall are bringing out a series of tales, as the prospectus says, handy for cyclists to carry and to read. One of them, by Miss Winifred Graham, is we see most appropriately named "On the Down Grade." It is to be hoped that the books will not be so fascinating as to engage the cyclist's attention while he is riding. It is bad enough to be "bunted" into by an errand boy immersed in "Jack Harkaway," but to be run into by an absorbed cyclist would be much worse. However, we daresay the series will be appreciated by those who do not ride as well as by those who do.

JOURNALS AND REVIEWS.

The Medical Chronicle.—This, the medical journal of the Owens College, Manchester, contains some good papers, amongst which we may mention that by Dr. R. W. Marsden, on the Joint Affections of Scarlatina, which he divides into four classes: (1) Scarlatinal Synovitis; (2) Septic Arthritis; (3) Acute or Subacute Rheumatic Synovitis; and (4) Tuberculous Arthritis. The first he limits to the form which occurs about the end of the first, or the beginning of the second, week of an attack of scarlet fever. Dr. Kelynack gives details of thirteen specimens of Meckel's diverticulum.

The Strand Magazine has the silliest "medical" story that we think we have ever read. A young lady with a strongly neurotic family history—her mother had been in an asylum—develops delusions on the eve of her marriage. Somebody gives her some capsules which make her perfectly well! As we know next to nothing of the pathology of insanity it is silly to speculate, even in fiction, upon possible cures, and it may be mischievous.

Journal of Mental Science, July, 1896. The opening article in the current number of the journal consists of the first instalment of a historical paper on Torquato Tasso and his biographers. It is from the pen of Dr. W. W. Ireland. A valuable statistical paper by Dr. Turner of the Essex County Asylum deals with the question of hereditary insanity. His information is based on the family history of upwards of a thousand cases occurring in that institution, and the following are the conclusions he arrives at. As regards direct inheritance amongst all classes of insanity, both acquired and congenital, the insane father transmits his mental instability to a greater number of offspring than the insane mother. It falls on the daughters mostly, and where the mother is insane, it is still more marked in the direction of the daughters, so that whichever parent is insane more daughters are ultimately affected than sons. In reversional or collateral inheritance, the stronger hereditary influence comes through the maternal branch of the family. Dr. Rivers gives a brief account of some investigations on mental fatigue and recovery, and Dr. Mickle commences a series of articles on brain surface morphology, dealing more especially with atypical and unusual brain forms.

Science Progress.—The first paper in the August number of this monthly review is on "Light and Electrification," by Professor Oliver Lodge, F.R.S., in which reference to the nature of the "x" rays is made. We suppose that the remark on the work of "Mr. Crooks" refers to Mr. Crookes. Dr. Halliburton contributes an interesting paper on "Iodine in the Animal Organism," in which he deals with the research of E. Baumann, who first isolated thyro-iodin from the thyroid gland. It contains 9·3 per cent. iodine. The paper on "Gold Extraction Processes," by Mr. T. K. Rose, D.Sc., assistant assayer of the Royal Mint, is full of interest. We do not find, however, any reference to the recently introduced modifications of the cyanide process, as, for instance, the employment of bromide of cyanogen, which is said to possess great advantages as a solvent of gold in rich pyritic ores.

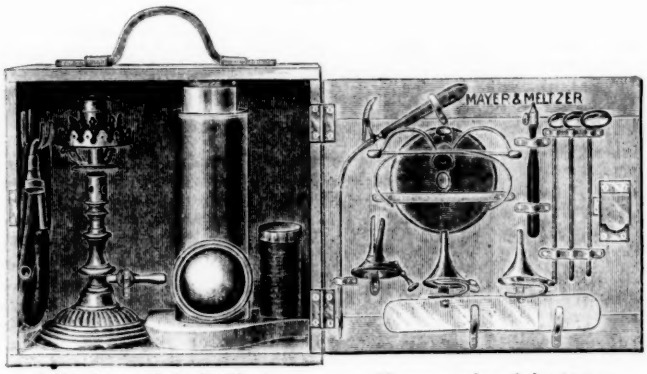
ERRATUM.—We have to apologise to Dr. Sedgwick Saunders for an expression in our review of his report on the City of London Sanitary District for 1894. We reproached Dr. Sedgwick Saunders because the report had "but recently reached us." But it has been pointed out to us that it had been a long time in our possession, but had been unfortunately overlooked.

New Inventions.

PORTABLE LARYNGOLOGICAL AND RHINOLOGICAL INCANDESCENT LAMP.

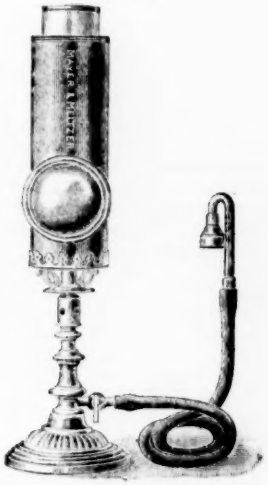
THE lamp, illustrations of which I send, has been made for me at my suggestion, and by my design, by Messrs. Mayer and Meltzer of Great Portland-street, W. It is a convenient and portable lamp contained in a light wooden case, and is constructed for the incandescent gas burner. By means of the rubber tube and Royall's adjustment, it is adaptable to any ordinary gas fitting, and gives a beautiful light, serviceable for laryngological, rhinological, otological, or ophthalmoscopic work. It contains, as shown in Fig. 1 (but can be had without these), all the necessary appliances for diagnosis. The lamp was exhibited at a meeting of the British Laryngological Society. The figures show the case containing the lamp and appliances, open, and the lamp separately on its stand. (Fig. 2.) With a Brin's bottle of coal gas the surgeon should be independent of any house gas supply.

FIG. 1.



Tubing, lamp and stand, with mica chimney and bull's-eye do., and incandescent mantles. Mirrors, specula, and glass tongue depressor.

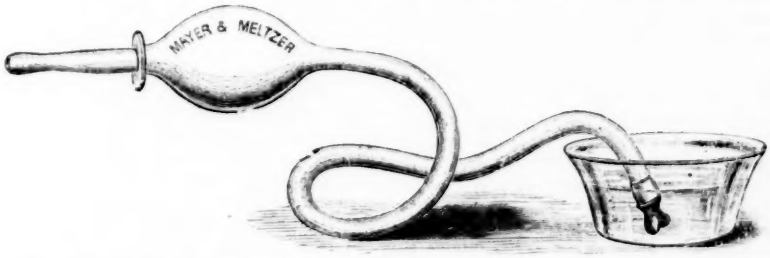
FIG. 2.



Harley-street, W. H. MACNAUGHTON JONES.

THE AUTO ENEMA.

THIS form of enema is the only one that can be easily used with one hand, and it is thus most useful for self-administration. The principal advantages claimed for it are: (1) that owing to the removal of the long efferent tube the bulb of the enema forms a handle by means of which the nozzle can be introduced and held in position while in use; (2) the afferent tube being longer, and owing to the fixed position of the bulb during use, the end of the tube is unlikely to leave the vessel containing the liquid; and (3) the price is low, the enema being not more expensive than others now in use. The enema is made by Messrs. Mayer and Meltzer.



AN IMPROVED LANCET.

To avoid drawing blood when vaccinating I have designed a lancet with a rounded blade. The instrument is made in one piece to facilitate its being kept aseptic and the bulb between the handle and the blade serves to steady the grasp of the instrument and to rub in the lymph. The lancet should be held between the thumb and two first fingers and passed backwards and forwards a few times in the direction of its flat surface. Blood will never be drawn unless the instrument is very clumsily used. I have found that parents object much less to vaccination when no blood is seen, their remarks being, "that it does not seem to have hurt baby this time." The lancet has been made for me by Messrs. Philip Harris, Limited, Birmingham. JNO. ROUND.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XXXIII.

Wakley's Conduct of the Question of the Newspaper Stamp Duties.—Criticisms by the Press.—Approval of Leading Liberals.—The Lord's Day Observance Bill.—Flogging in the Army.—The Publication of Lectures Bill.—Other Reform Measures.—An Indefatigable Member of the Legislature.

WAKLEY'S conduct in the House of Commons of the question of newspaper stamp duties was subjected to a very mixed reception by the press. He had, it will be remembered, pointed out to his constituents and to the public that he would not submit to any compromise. They had entrusted him with a mission—namely, to move for the total abolition of newspaper stamp duties. This mission he intended to carry out. Neither any offer of reducing the duty nor any plan whereby part of the duty should be regarded as a carriage-rate would be accepted favourably by him. The various journals written in support of the Reform party, as well as those representing advanced Radicalism, and what is now termed Socialism, had all combined to rely on the firmness of his attitude. They rejoiced, as we have seen, over the fact that Wakley, the straightforward democrat, had the matter in his charge instead of "the sublime" Bulwer—novelist, dandy, playwright, and aristocrat. And lo! the result of Wakley's parliamentary manœuvres was the securing of an offer from Government containing the identical two measures of compromise which Wakley had declared that he would on no account agree to. The fourpenny tax was to be reduced to a penny, and the penny was to be regarded not as a tax but as payment for the carriage of the paper. Moreover, the suggestions of the Government were identically those of the maligned Bulwer, who had not omitted to point this out with some asperity in the House. The *Times* was immediately up in arms against Wakley, calling him the puppet of Spring Rice and sneering at him as cajoled into accepting a compromise in spite of his professions. The *Dispatch* owned itself puzzled. "Judge our surprise," runs its comment, "when, instead of moving (what appeared on the list of notices) for a total repeal of the stamp duties on newspapers, Mr. Wakley moved the order of the day, 'That the House resolve itself into committee on the Stamp Acts.' Gods! we exclaimed, the man has surely been bamboozled by the Chancellor of the Exchequer." For a few hours it was rife in Tory and Radical circles that Wakley, the incorruptible member for Finsbury, had shaken hands with Spring Rice, a stiff-necked Whig, over a question involving a tax upon the knowledge of the people. On the other hand, the papers which really understood—those which were behind the scenes, owing to the fact that their editors were in touch with the leaders in the movement—were unanimous in praise of Wakley's conduct in acceding to the request of the Chancellor of the Exchequer to defer his motion. Hume wrote to the press to explain that the course which Wakley had taken was the right one under the circumstances. The *Political Examiner*, a paper which was afterwards incorporated with the *Ballot* and edited by Wakley, spoke strongly in favour of Wakley's conduct denouncing the short sight of the *Times* and of those who detected in a necessary piece of diplomacy a useless piece of treachery. Cleave, the irresponsible editor of the *Weekly Police Gazette*, whose opinions might be taken to represent the sentiments of the more violent and socialistic section of the Radical party, was equally satisfied with the course pursued. Cleave was one of the very persons whose conduct in issuing unstamped papers in defiance of the law Wakley had specifically condemned, but Cleave had sufficient insight into character and motive to understand that Wakley was the last man in the world to play fast and loose with pledges. Public opinion, in fact, was about evenly balanced, while its trend was entirely in favour of Wakley. Wakley, however, was not a man to allow himself or his actions to be misunderstood for any length of time. Throughout his life he was exceedingly frank as well as exceedingly ready with his pen, and he immediately wrote a circular letter to all the journals of importance in the metropolis and provinces in which he explained his reasons for the course he had adopted. When the Chancellor of the Exchequer asked him to defer his motion, because Government had a suggestion to make, said the letter, the Reform party in Parliament at once saw that by allowing Mr. Spring Rice to have his way the issue would be considerably narrowed. The Reformers would obtain what the right honourable gentleman promised and still be free to agitate later for a total repeal. Had the total repeal been the motion before the House it might have been lost and nothing have been passed, whereas total repeal could now be moved as an amendment to Mr. Spring Rice's measure of compromise; and should it not be carried, at any rate the reduction of the duty from fourpence to a penny was secure. Wakley concluded his letter by pressing upon the people at large to sign petitions in every locality in favour of total repeal.

Wakley's management of the whole matter gained him great kudos in the House for its moderation and wisdom. It was distinctly to his personal advantage to be brought into contact with such people as Lytton, Grote, Buller, and Molesworth, and that in the honourable position of leader. These men recognised that Wakley's prudence and pliability had advanced the cause a distinct stage. They knew of his promises to the Finsbury electors that he would have no compromise but that he would divide the House on the question of total repeal or nothing. And they appreciated how much more palatable to a man of his disposition it would have been to keep literal faith with his constituents and to have made a stirring appeal to the House for the freedom of the press, even though he should actually retard that freedom by so doing. Appreciating these things they gave to Wakley a generous meed of approbation. They saw that he was not afraid to take the risk of temporary misapprehension to gain the end that they all had in view, and they regarded his attitude as entirely consistent and under the circumstances the only one that was likely to be successful. No one doubted that he would seize the first opportunity to defy the Government and to declaim his unappeasable hatred of compromise and his intention to be faithful to the very letter of his pledges to his constituents, but in the meantime such action would have retarded the progress of the very movement at the head of which the Reformers had placed him.

The fulness with which Wakley's connexion has been described with these three prominent movements during his first period as representative of Finsbury in Parliament need not be repeated in dealing with his subsequent Parliamentary career. But his methods in the House of treating these three widely different affairs have been described at length because they were both characteristic and successful, raising him in a few months from comparative political

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., XXIII., XXIV., XXV., XXVI., XXVII., XXVIII., XXIX., XXX., XXXI., and XXXII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, and 30th, June 6th, 13th, 20th, and 27th, July 4th, 11th, 18th, and 25th, and Aug. 1st, 8th, and 15th respectively.

obscurity to a position of influence and popularity. The affair of the Dorchester labourers stamped him as an orator; his conduct of the motion for abolition of the newspaper stamp duties proved him a sound tactician; while his successful management of the Remuneration of Medical Witnesses Bill showed him to be specially mindful of the needs of his profession, upon which needs he had claimed largely a right to a seat in the House. In all the other measures before the House Wakley voted as a consistent Radical, thorough-going and passionate enough to coöperate with Daniel O'Connell, yet sufficiently aware of the needs for compromise and of the advantages of circumspection and of taking advice to be admitted by the philosophical Radicals, of whom Grote was the most typical leader, into their intimate counsels. No attempt will therefore be made to register all that was said and done by him in general politics. His frequent speeches as reported in Hansard were always vigorous, pithy, and humorous; and their tenour can be deduced readily from the fact that he was a broad-minded and consistent reformer, insisting largely on the rights of the people, and especially anxious that the people should have, as far as possible, equal chances with the governing classes of getting wholesome food, healthy houses, and adequate education.

In some minor measures he took a more individual part. His motion in favour of the repeal of the Septennial Act came to nothing. It was a subject upon which he felt strongly, and in all his addresses at Finsbury he said plainly that he thought Members should come before their constituencies more frequently to render an account of their doings and to be judged by them. He was not disposed to support the foolish demand of the Chartists for annual elections, an innovation which would have made the life of public men an unendurable nuisance, and would have destroyed all chances of individual action; but he considered that triennial parliaments constituted the logical mean between the existing system and the demand soon to be formulated in the Charter. His motion to this effect never came on for debate in the House, being shelved, in spite of his protests, to make room for more urgent and pressing matters, but he had the courage of his convictions, for he persistently volunteered to offer himself every three years, or every session if they liked, to the electors of Finsbury, that they might ratify their choice or change their minds.

Wakley's avowed disrespect for one element of the British Constitution—viz., the House of Lords—and for such venerable institutions as the medical corporations, together with his close association in the work of reform with a great number of earnest Dissenters, had given rise to a popular belief that he desired the disestablishment of the national Church and even that he was a freethinker and an atheist. Undoubtedly he was a man with many enemies, for the fact that such was his reputation could only have been due to gross and purposed misrepresentation of facts. He was a regular churchgoer and had been brought up in strict observance of the ordinances of the Protestant faith. It was possibly as a public answer to this malignant rumour that he made it widely known that he was educating his eldest son for the Church, while it will be remembered that he was a churchwarden, and not one who had accepted the post because of any dignity that was attached thereto, but an exceedingly hard-working and conscientious officer, making the affairs of his parish an ever-present responsibility. We cannot find in his life, public or private, one single thing that could have given even colour to the rumour that he was lax in his religious opinions save his attitude towards the Lord's Day Observance Bill. He objected to the entire closing of shops of all kinds on Sunday, and when the question was before the House in June, 1836, during a debate on Sir Andrew Agnew's Bill, prohibiting all open labour on Sunday except works of mercy or necessity, he contended that such universal and compulsory closing of shops was unfair to working men, who, being employed during the whole week, and in those days up till a late hour on Saturday night, were often unable to do their shopping on pay-nights. The public-houses were open, but at no other mart could a workman spend his money save over the publican's bar. It may with truth be claimed for Wakley in some degree that he was a pioneer in the movement which Mr. Mark Judge and his friends have recently brought to a successful issue for opening museums and picture galleries on Sundays for the benefit of those who have no chance of seeing the nation's treasures at other times. Exactly half a century ago Wakley inveighed against the narrow Sabbatarianism that thought it wicked to delight the eye and instruct the mind on the seventh day as "only another of the hydra heads of cant, sham, hypocrisy, privilege, and monopoly." He advocated in the House that the British Museum should be open on the days that workmen could visit it, such as holidays and Sundays, and objected to the monopoly of the Fellows of the Zoological Society or the proprietors of the Zoological Gardens enjoying the privilege of a Sunday ticket, while the working man was excluded on the only day when he could be present. It is difficult to believe that views so reasonable, even then so widely held and now so remarkably endorsed, could ever have been tortured into disrespect towards the Established Church, but they seem to be the only opinions that he ever held to which an honest section of the Church of England could have objected.

In the same year—viz., 1836—the attention of Parliament was drawn to the barbarous practices attendant upon flogging in the army. Wakley was fully conversant with the subject, as THE LANCET had several times related the horrors attendant upon this form of military punishment. Daniel O'Connell, in the course of a debate upon what was known as the Mutiny Bill, pleaded for the entire abolition of flogging. In this view the majority of military men and the Members for garrison towns agreed with him. Wakley protested indignantly against the practice. Was it intended, he asked, to punish insubordination by death? Surely not. Yet there were numerous cases of men being flogged to death. In short, capital punishment was of frequent occurrence for mere offences against discipline. He challenged any Members in favour of this degrading practice to avow their opinions on the subject from the hustings and find out in that practical manner what their constituents felt on the subject. He further commented on the varying severity of the punishment. It was not, he said, necessarily the number of strokes inflicted which regulated the severity of the pain, but also the time occupied in administering a flogging. He quoted the terrible case of William Saundry, who had recently died after being flogged at Woolwich, and demanded that the House should be furnished with an official report of the inquest in this and similar cases. He also used the significant words, "Ah, had there been a medical coroner!"—significant because ten years later it was his duty as a coroner to conduct an inquiry into a case where death had followed upon military flogging, and he performed this duty with such determination, eloquence, and furious anger that he roused in the whole nation a feeling that the monstrous custom must no longer exist under civilised laws. The story of the death of Frederick White at Hounslow, as revealed before Wakley the coroner, did, as will be seen when it is related, what no efforts of his or of O'Connell in the House of Commons could effect, and it may truly be said that it gave Wakley an opportunity for which he had long been waiting.

A Bill providing for the publication of lectures passed the House of Lords, also in 1836, without attracting

much notice, but Wakley had more than one opportunity in the lower chamber of expressing his opinions upon it. It is certain that no Member had a greater right to hold opinions and to express them in the matter, seeing that it was at his action in publishing Abernethy's lectures in the early numbers of THE LANCET that the Bill was aimed. Wakley said that if the Bill was intended to apply generally to England unless proper amendments were introduced he should divide the House against the motion, for it seemed to him that it was intended, not only to prevent the publication of lectures, but of criticisms on lectures. Again, if it was intended to apply only to private lectures it would be a proper protection, but if it was intended to shield public as well as private lectures he should consider that it ought not to receive the sanction of the House. In the present state of the law no such protection was needed, for it had been laid down by Lord Eldon that private lectures could be protected if it were proved that there was a breach of implied contract between the lecturer and his individual hearers. In the case of Abernethy *v.* Hutchinson an injunction was granted to restrain the publication of lectures without any means of discovering whether the lectures in question were original or not—whether they were, in fact, fit subjects for copyright protection. Subsequently, however, it was proved in Chancery that Abernethy's lectures were public, being delivered on a public occasion and in a public capacity, the consequence of which was to deprive Abernethy of the protection and remedy he asked for. Wakley considered it absurd that such a Bill should pass the Lords without a word of discussion, and unless the Lord Advocate, who had charge of the measure in the Commons, assured him that public lecturers were not to be shielded from public notice he should divide the House against the Bill. Although Wakley was speaking here in defence of the principle which had dictated his own actions of fifteen years previously he was not really any longer concerned in a practical manner with the fate of the Bill, for the position of THE LANCET had now much altered, and so far from hospital surgeons and lecturers issuing injunctions to restrain Wakley from publishing their words his reporters were given every facility, and in most cases the original MSS. were sent to the office before the delivery of the lectures. In fact, after the final decision of the protracted case of Abernethy *v.* Hutchinson,[2] the profession decided to follow the lead originally given by Sir Astley Cooper and to admit the right of the medical public to hear their words. Wakley's protest in the House was made to defend his past conduct, not his present interests. It received no real support, only a few among his immediate colleagues promising to vote with him in favour of an amendment condemning the extension of copyright privileges to public lecturers. Seeing how much the feeling of the House was against his amendment Wakley did not press the matter to a division, but in committee he again uttered his protest. It was, however, without avail and the Bill was passed, on the motion of Lord John Russell, by 20 votes.

In August, 1836, we find Wakley supporting a motion brought forward by Mr. Walter, the editor of the *Times*, dealing with certain clauses in the Poor-law Amendment Bill. Wakley quoted instances that had become known to him through THE LANCET of insanitary workhouses, where the food and ventilation were bad and deficient, and said that the Poor-law Commissioners seemed to him—speaking not without knowledge of the subject—to desire to treat poverty as crime and the pauper as a fit subject for penal environment. He also spoke at length in support of a resolution brought forward by Sir William Molesworth in the spring of 1837 to abolish the property qualification of Members of Parliament, and he supported Daniel O'Connell on several occasions in his claim for Ireland of the right to govern herself, notably during the debate on the Municipal Corporations (Ireland) Reform Bill.

In June, 1837, there was a general election, and Wakley was able to go to his constituents conscious of having justified their choice and of having established a right to ask for a continuance of their suffrages. For over and above the merits of his individual performances he had worked loyally for the cause of reform in the most practical manner possible. During the last year there had been, according to a useful little publication entitled "The Parliamentary Vote-Book or Election Guide," sixty-nine principal questions before the House of Commons, "beginning with the election of the Speaker and ending with the Lords Amendments on the Municipal Corporation Reform Bill?" On these sixty-nine questions Sir Robert Peel gave in all but twenty votes, Silk Buckingham gave thirty-two, O'Connell thirty-three, Hume thirty-five, Warburton forty-five, and Wakley fifty-one, the highest number in the book.

(To be continued.)

[2] See chapter x. of this Biography.

THE HUNGARIAN MILLENNIAL CELEBRATION.

BUDAPEST, which has not inappropriately been called the Chicago of Central Europe, will be one of the principal centres of attraction during the autumn holidays. This year is devoted to the celebration of the thousandth anniversary of the founding of the Hungarian nation. For this purpose an exhibition, unique of its kind, is now attracting numerous visitors. To the lay public the reproduction of the Ós-Rudaváv, the mediæval Hungarian-Turkish city, will be particularly interesting. There are also exhibits which medical men and sanitary reformers may study with advantage. Thus a special building has been set aside for all that relates to hygiene. Another building is devoted to the education and hygiene of children. The balneological exhibition is already pronounced to be a great success. The wealth of Hungary in mineral springs is well-known, but an exhibition of bottles and labels is not very attractive. It may be interesting to read a report as to the contents of these bottles; but even when they are arranged in artistic pyramids or form other designs they do not in themselves necessarily constitute a popular exhibit. The organisers of this section have, however, hit upon a very happy device. They have set up a series of panoramas where by skilfully contrived optical illusions the visitor may see the spring from which the water is derived or the water "cure" establishment near the spring. In another section is shown all that relates to the public services of the modern town of Budapest by means of models of the sewers, the gasworks, the waterworks, public buildings, hospitals, &c. Naturally there will be a number of congresses at which foreign visitors will be cordially welcomed. There is to be a National Hungarian Congress on Hygiene and Medicine and another on the Housing of the Poor—a very necessary subject to discuss at Budapest, where, as yet, the accommodation available for the working classes is inferior to that existing in most other large towns. Many congresses dealing with questions that are not connected with public health will also be held. In the town of Budapest the sanitary reformer will find much that is instructive. For instance, there has recently been opened an underground electric railway, and the central milk hall is one of the largest establishments of the sort in Europe. The town slaughter-house is also well worth visiting, and not far away the pig market of Steinbrück is one of the most extensive swine depôts of Europe. Then there are the new waterworks, and the system adopted in Budapest with regard to the prevention of contagious diseases may be worthy of study. Those who had the good fortune to assist at the International Congress of Hygiene which met at Budapest in 1894 will bear witness to the lavish hospitality and hearty cordiality with which the Hungarians greet their foreign visitors.

THE LANCET.

LONDON: SATURDAY, AUGUST 22, 1896.

THE annual meeting of the British Dental Association, which was brought to so successful a conclusion last Saturday, affords yet another proof of the rapid progress which dental surgery has made within recent years. Politically, socially, and scientifically it has advanced by great strides, and it is questionable if in the whole of medical history so much sound and rapid progress can be shown in so small a space of time. In 1878, or only eighteen years ago, the Dentists Act was passed, and it is mainly by the forces which that Act set in action that this progress has been made. At that time a proper course of education at a hospital was undergone only by the few, and the Act, by making such a line of education compulsory and compelling all dentists to register, provided the public for the first time with a guarantee of the abilities of the dental practitioner. At the time of this compulsory registration a certain number of men, totally ignorant of the rudiments of the profession, obtained a place upon the Dentists' Register. Such an event was difficult, and it may have been impossible, to guard against, but as every day this class becomes a diminishing quantity and the properly educated one an increasing quantity, so the Register as a criterion of a man's ability grows in value. Out of compulsory education has grown the necessity for increased means and accommodation for teaching, with the result that such centres as Birmingham, Manchester, and Liverpool can now boast of well-equipped dental hospitals and schools.

But improvement in education is not the only thing which has occurred since 1878. At that time the only society of any note connected with dentistry was the Odontological Society of Great Britain; now, however, there is that powerful organisation, the British Dental Association, with its numerous branches, and in addition there is the Manchester Odontological Society, the North of England Odontological Society, and the Odonto-Chirurgical Society of Scotland. The influence of these new societies, especially the British Dental Association, has tended not only to raise dentistry to its proper social position in the eyes of the medical profession, but has also been the means of bringing home to the laity the fact that good teeth are absolutely needful if anything like a proper standard of health is to be maintained.

The various operations for the preservation of the teeth have likewise made rapid strides. The only conservative operation at all practised was filling, and although the knowledge of the methods of using and manipulating gold has advanced but slightly a much clearer insight has been gained into the behaviour and working of amalgam. When it is remembered that amalgam must of necessity be the filling adopted in the majority of cases, the improvements in this direction are important, and with such men as TOMES in this country and BLACK in America investigating the question fresh discoveries may be looked for in the near future. The treatment of root canals by antiseptics is quite the outgrowth of recent years, and the same may be said of the operation known as crowning. The happy result of both these advances is the saving of many teeth which previously would have been treated in a more radical manner by extraction. Thirty years ago the dental engine was to be found in the surgeries of the few; now its use is universal, and electricity has now been brought to aid the dentist in many of his tedious operations, and has proved a boon alike to operator and patient. A more thorough knowledge of the pathology of "pyorrhœa alveolaris" is also a noteworthy advance, and the investigation of this disease has been the means of showing that a much more intimate relation exists between general systemic conditions and diseases of the teeth than has generally been supposed. Hand in hand with operative work the scientific side has made progress. A clearer insight into the part played by micro-organisms in the mouth has been gained, and the researches of MILLER have gone a long way to clear up the vexed question of the pathology of caries and have shown that a knowledge of the use of antiseptics is required as much by the dental as the general surgeon. The knowlege of dental anatomy and histology has also received many valuable additions, amongst which may be noted the researches of MUMMERY on the structure of dentine, researches which show that dentine is probably developed in a manner very similar to bone in membranes. The investigations of TOMES and BLACK into the chemical composition of the dentine seem to have completely overturned the generally accepted theory that caries was in the main due to deficiency of lime salts, while quite recently the former observer has proved in a most conclusive manner that enamel is a structure practically devoid of organic matter. Many other instances might be quoted to show the universal progress which this branch of medical science has made. It must indeed be gratifying to those who strove so hard to obtain the Dentists Act to find their labours productive of such results within so short a period of time.

THE authorities of Chicago have been driven to make rules and regulations for midwives by even more serious evils than those which have brought all parties here to see that something in the same direction will have to be done on the score of humanity. In Chicago the Department of Health, under the authority and with the approval of the State Board of Health of the State of Illinois, publishes, with various statistics of sanitary work, these rules, and sets forth the reasons for the course it has taken. The rules have been drawn up by the assistant commissioner and submitted to the board, whose approval in July was promised, so they may be regarded as having all the force and effect of the rules of the State Board. The malpractices of so-called midwives seem to be of the worst order and to consist very largely in the use of the coarsest methods for the production of abortion. Chicago has, we suppose, a population a fourth as large as that of

London—and yet the report tells us that "a recent brief search of the records of the coroner's office discloses no less than thirty-four cases of unfortunate women and girls who have come to an untimely end through the unregulated practice of midwives in the city. It is obvious that the cases of such crimes that come to light are only a small proportion of the whole number. Many are certified as dying from 'other causes'—we are grieved to learn, not infrequently by a certificated physician."

Almost a more unhealthy symptom than the number of such cases is the difficulty of bringing them to punishment. The report speaks somewhat despairingly on this point. It even seems as if the police authorities had determined to take no more trouble in promoting the trial of such cases owing to the uniform failure of any attempt to secure convictions. In only thirteen cases was there any clue to the operator, and "in no case was any punishment inflicted and the women were allowed to continue their nefarious practices." Such impunity of vice in a civilised community seems almost incredible. One woman under instructions was discharged on the ground that there was "no use in holding her to the grand jury, since she was twice acquitted on trial, although she once admitted in the Criminal Court that she had used the catheter (found on the post-mortem examination) pushed through the uterus and lying in a bed of pus in the omentum." Two other "abortionist midwives" were arrested soon after this case. The post-mortem examinations of their victims "showed lacerations of the fundus and a perforation through which a loop of the intestine had been dragged down, torn apart, and its contents filling the cavity." The details of such cases are well described as "sickening," and the report speaks as if it were quite relieving to find—as was most frequently the case—only retained and offensive placenta and consequent death from septic peritonitis. The Health Department is going to try to effect by its regulations for midwives what the police have failed to accomplish in their way. The rules will have the force of State sanction and are in themselves excellent for the regulation of honest women acting as midwives. Rule I. defines midwives and provides that no one shall practise as a midwife unless authorised by the State Board of Health of Illinois. The certificate of such authorities is to be on view in the office or reception room of the midwife. Rule II. requires that every midwife shall register her name with the medical Inspector of Midwifery and shall show to him her certificate from the State Board of Health. Rule III. specifies that such persons shall attend natural labour only. The authorities define "natural labour" and also specify the circumstances and features of a labour that requires a physician to be called in by the midwife. The family is to be asked to choose the physician; but if they are too poor to pay, the midwife is to send for the nearest department physician, who is to attend such cases "without pay." We assume that this rule only means that the physician is to attend without charging the family of the patient, not that his life-saving services are to be unrequited by the authority which he serves.

The rules laid down for regulating the practice of midwives by the authorities in Chicago are almost literally taken from the Austrian regulations, which have been lately the subject of much study by those interested in the promotion of legislation for the regulation of midwives in this country. They are not precise enough—no rules can be—to include every individual case. But they are sufficiently definite to guide honest and respectable women who have had a little training in the majority of unusual cases. We need not specify them all here in detail, but Rule V. calls for notice. It forbids a midwife to keep obstetrical forceps or any other instrument for the performance of an obstetrical operation, or any drug or instrument or other article which may be used to procure an abortion or to cause or hasten the expulsion of the fœtus. She is also forbidden to administer chloroform or advise the use of any but domestic medicines. Any violation of this rule is to be considered as proof that the midwife performs operations and practises medicine in violation of Section 10 of the Medical Practice Act. But though doubtless well meant this rule strike us as being too comprehensive to carry out in practice. The midwife must keep a record of all births at which she assists. It is noticeable that in Chicago the Health Department is charged with the duty of registering midwives, and that the medical officer of health is the authority to whom Dr. FRASER in our columns has proposed to give the charge of the registration of midwives in this country, with a certain supervision of their conduct and power of suspending them in cases of misbehaviour. Although the rules themselves are good for the guidance of respectable women who have had a little training as midwives or midwifery nurses, we see no provision in the paper before us for securing this modest amount of training. There is no specification of the conditions on which the certificate of the midwife is to be granted by the State Board of Health. We assume that there are conditions and that it is not competent for any woman who wishes to dub herself midwife and demand from the State Board a certificate. It is another question whether these rules will be effective for the detection and punishment of the crimes which have moved the authorities to formulate them. We are very much disposed to doubt this unless the police and magistrates of Chicago play a more vigilant and courageous part. Women who can so easily elude detection by these authorities will have no scruple and no difficulty in concealing the instruments and drugs which they use to produce the horrible lesions which we have described.

UP to the present time all Poor-law officers have been dependent on the goodwill of the board of guardians who happened to be in office at the time of their retirement for a superannuation allowance, the amount of which was regulated by the Statute 27 and 28 Vict., c. 42 (1864-5). This statute *permitted* the guardians to award an officer who retired on account of old age or infirmity a pension the aggregate of which should not exceed one-sixtieth of his average yearly emoluments for each year of service. In most cases the guardians availed themselves of this permissive act, occasionally they did not. As a result of prolonged agitation, therefore, a Bill was made law by Royal assent last Friday, the provisions of which we laid before our readers on p. 1368 of

our issue of May 16th. In general terms this statute will compel every one in the Poor-law service to contribute from 2 to 3 per cent. of his salary per annum, according to his past tenure of office, to a fund from which, supplemented by the rates if necessary, every officer, assistant, or servant will be entitled to draw an annual pension, based on the same rate as the Act of 1864–5 upon his or her voluntary retirement at the age of sixty or compulsory retirement at sixty-five. The Act does not extend to Scotland and Ireland.

The new Act is far-reaching in its scope and will affect schoolmasters and school mistresses, registrars, relieving officers, district parish medical officers, medical superintendents of fever hospitals, asylums, and infirmaries, and all the nurses and servants of these various institutions. That it will benefit some of these is beyond doubt, but that all will derive advantage is very questionable. It is with the interests of medical men and nurses thus affected that our chief concern lies, and as it is possible for any one in the service within three months after the passing of the Act to exclude himself or herself from its operations by writing to the clerk to his board, we wish to lose no time in bringing the matter under the notice of our readers. Speaking generally we have no doubt that the Act will be an advantage to most medical men in the Poor-law service, especially such as have already been a considerable number of years in that service and who have at present no intention of quitting it. But all should bear in mind that under its provisions no one is entitled to a pension on the ground of old age before reaching sixty years of age, and if he should for any reason leave before reaching that age he will lose his chance of pension and also all the premiums he may have paid from the present time. There are, we believe, many who grow old and grey in the service of the Poor-law, a fact which has from time to time caused us some surprise considering their indifferent pay and the exacting nature of their duties. But, on the other hand, there are many others who regard their office only as a temporary one; and these should lose no time in excluding themselves from the operation of the Act, trusting—should they happen to remain to old age—to the goodwill of their Board and the permissive provisions of the Act of 1864–5.

But when we turn to the manner in which the Act affects the Poor-law nurse it is quite clear that all except quite a small percentage should at once exclude themselves from the new Act. In nine cases out of ten a nurse goes to an infirmary asylum or fever hospital merely for a few years to gain experience, after which she takes up general hospital or private nursing, or, in a large number of instances, marries or abandons her profession for some other reason. Under such circumstances all the deductions from her salary will be lost. It seems to us that this Act was framed without due consideration of the interests either of the nurses or the cause of nursing in Poor-law institutions. It affects the nurse personally in the manner just referred to, and a clause should certainly have been introduced enabling any nurse who joins *at any time after the passing of the Act* to exclude herself from its operation. But, further, the cause of good nursing in infirmaries, workhouses, and fever hospitals must inevitably suffer in the future by the provisions of this Act, for it will induce a nurse to stay on after she is past the efficient performance of her duty. Experienced matrons say that after a period of service varying from five to ten years a nurse gets into routine ways which are not favourable to the efficiency of the service. But whether this be so or not many hold the opinion that a nurse ceases to be efficient in her duties long before she reaches the age of sixty.

Annotations.

"Ne quid nimis."

THE REPORT OF THE ROYAL COMMISSION ON VACCINATION.

WE understand that the various abstracts of the Report which have appeared in the press during the last few days are quite unauthorised and that, indeed, the publication of the Report in its complete form can hardly be expected for at least a fortnight, as the paragraphs containing the opinions of the dissentient members of the Commission have still to be appended. We have, further, reason to believe that many of the extracts which have found their way into the papers are in some respects not quite accurate. In view of the very serious nature of the issues involved we think it best deliberately to refrain from any comment based upon imperfect data, reserving the expression of our opinion until we have the opportunity of carefully studying the full text of this most important document. It would not be fair to the distinguished men who have been engaged for seven years in taking and weighing the evidence on which their conclusions are based to pass any judgment on their work until we are in possession of the Blue-book itself.

"LUDWIG AND MODERN PHYSIOLOGY."

IN January of this year Professor Burdon Sanderson delivered a lecture at the Royal Institution on "Ludwig and Modern Physiology," in which he touched with the appreciative veneration of a disciple upon the character and influence of the well-known Leipzig teacher, and with the genius of an unfettered intellect upon the conditions and relations of the science of which he is so authoritative an exponent. Separating physiology or the science of living processes from the science of living beings, for which he borrowed the philosophical term ontology—in which relation that term for abstract nothingness will, it is to be hoped, be more fruitful of results than in its older sense—he showed that the physiologist has to deal with "the unknown knowable, not with the transcendental." He dwelt upon the importance of the principle which guided Ludwig and the path-making men of his generation, such as Helmholtz, Du Bois-Reymond, and Brücke—namely, "that vital phenomena can only be understood by comparison with their physical counterparts." The forerunners to whom Ludwig was most indebted were, in Professor Burdon Sanderson's opinion, E. H. Weber of Leipzig, Ludwig Fick of Marburg, and the great chemist, R. W. Bunsen. Some interesting particulars of Ludwig's method of collaboration with his students were mentioned, as also little reminiscent touches calculated to evoke happy memories in many, such as the Sunday morning receptions in the laboratory and the general kindly intercourse of the teacher with his scholars. The conclusion of the lecture was occupied with a short consideration of the old and new vitalism, the latter being in a sense a reaction against the

attitude maintained by Ludwig—a reaction which does not number Professor Sanderson among its supporters. He spoke, however, respectfully of Hans Driesch's researches into the mechanics of evolution, and admitted if the latter's work eventuates, as Driesch hopes it may, that the autogeny of a single individual would be a splendid discovery which would reduce to insignificance any question of its being in conformity with our present notions of the uniformity of nature. It would, indeed. Then shall be brought to pass that which is written in the second part of *Faust*, when Homunculus in process of synthetic production in a flask, says to his fond and scientific parent: "Ah! papa! How then goes it? 'Twas no joke! Come, gently press me to thy parent heart! But not too fondly, lest you burst the bottle!" Wagner was a great creation and is not unrepresented to-day.

THE PETROLEUM INQUIRY.

IT is not at all surprising that the members of the Select Committee appointed to inquire into, and report upon, the sufficiency of the law relating to the keeping, selling, using, and conveying of petroleum and other inflammable liquids, and the precautions to be adopted for the prevention of accidents with petroleum lamps, have found that it was not in their power to conclude their investigation by the end of the Parliamentary session just terminated. They have agreed, therefore, to report the evidence already taken to the House and to recommend that a committee on the same subject should be appointed early next session. As a perusal of the proceedings reported in our Parliamentary column from time to time will show, the evidence of the expert witnesses has been of a most conflicting kind and great differences of opinion have chiefly centred around the question as to what is a safe flashing point for ordinary paraffin oil. On this point we doubt whether some of the witnesses were competent to give an opinion, or at all events one that could be based on practical experience. We are, of course, in view of the active inquiry[1] we made at the close of last year into the defects of lamps, naturally curious to know whether the committee will decide upon altering the present flashing point by raising it, or whether they will suggest that legislation should be brought to bear upon the construction of the lamps. We have expressed the belief, and still incline to the view, that the latter course would greatly minimise if not reduce to practically *nil* accidents of this kind which in by far the majority of cases arise from the lamps being upset.

EDUCATION AND INFECTION.

AT the close of an interesting paper on the Prevention of Tuberculosis in recent issues of the *Medical Magazine* Dr. Heron, whose strong convictions upon the contagiousness of tubercle are well known, makes some suggestive remarks on a matter of real public concern, which apply not merely to the disease he is specially considering. After alluding to the melancholy instances of quackery in the treatment of phthisis and the extent to which this is fostered by the public, he rightly says that the cause of this lies in the ignorance that prevails upon the nature of disease even amongst the cultivated laity. The inference is that this cause should be removed by education, and in his advocacy for school instruction in elementary facts of infection he should have much support. It ought not to be difficult to present the leading principles of infection and its avoidance in so simple a manner as to be understood by the young. The difficulty would lie rather in the endeavour to prevent the abuse of knowledge so imparted, and however much we may sympathise with an effort which to Dr. Heron's mind would do more than anything else to diminish the scourge of tuberculous disease we shrink from endorsing his suggestion in its entirety. It may be conceded to the full that right ideas concerning the spread of disease by infection, the modes of conveyance by contagion, the precautions that must be taken to prevent its transference, and so on, would be of the greatest possible advantage to every individual. But how are such right ideas to be imparted? If one may judge from the extraordinary blunders into which scholars—of adult age as well as minors—fall with respect to the simplest physiological facts, it is safe to conclude that a large number instructed in the theory and facts of infection will receive very wrong ideas indeed. One result might be such an exaggerated dread of infection as to render life a burden. For the present, and indeed perhaps in the future too, the wisest course is to leave to the members of our profession the duty of imparting the knowledge they possess to those who have need of it when occasion arises. The lessons then learnt are more likely to bear fruit, since they are accompanied by practical experiences and have none of the vague unreality which must pervade instruction imparted at other times.

[1] THE LANCET Analytical and Sanitary Commission on Dangerous Paraffin Lamps, THE LANCET, Jan. 4th, 1896.

THE JUNIOR STAFF OF ST. BARTHOLOMEW'S HOSPITAL.

WE published last year various letters from correspondents about the question of payment of the junior staff at St. Bartholomew's Hospital. The writers, as is generally the case, took different views on the subject, but we now learn that the authorities have decided to raise the pay of the junior staff, so as to compensate the members of that body for having to pay for their board. From Oct. 1st next the junior house surgeons and junior house physicians, who are non-resident, will receive £25 each, and the senior house surgeons and senior house physicians, who are resident, will be paid at the rate of £80 a year, this being considered the equivalent of board in the residential college attached to the hospital. The resident midwifery assistant, the extern midwifery assistant, and the ophthalmic house surgeon will also be paid a salary of £80 a year, whilst the senior and junior resident anæsthetists will receive £120 and £100 a year respectively. We are glad to see that the hospital authorities have decided upon this modicum of generosity, but we should be glad if they would establish a college kitchen on the model of an Oxford or Cambridge one. At present we believe the manciple farms the catering, at any rate to the students in "College," and supplies the service, and of course it is to his interest to make it pay. Now we contend that this should not be so. The hospital itself should supply food to the resident students and junior staff, and no profit should be made. However, the rise in salary will certainly remove the disabilities under which the poorer student, according to some of our correspondents, used to suffer, and perhaps the other reform will come in time.

THE RELATIVE STRENGTHS OF DIPHTHERIA ANTITOXIC SERUMS.

WE publish elsewhere a paper on "Anti-diphtheritic Serum and its Preparation" read by Mr. Bokenham in the Section of Pathology at the last annual meeting of the British Medical Association held at Carlisle. We need not consider here that portion of the paper which deals with the general subject of the production of antitoxin, but inasmuch as Mr. Bokenham describes in some detail the methods of testing employed in determining the antitoxic strengths of the serum sent out by Messrs. Burroughs, Wellcome, and Co., that portion of the paper has a special interest at the present juncture. Under the heading of "Results of

Investigations" Mr. Bokenham gives a set of nine tables, in which are recorded a series of testings which extend over a period dating from Jan. 30th, 1895, to May 5th, 1896. In these experiments two different methods of estimating the antitoxic value of antitoxic serum have been made use of, the first six tables evidently recording estimations made according to the French method, the last three giving those carried out by Ehrlich and Behring's method, which has been adopted for the testing of Messrs. Burroughs, Wellcome, and Co.'s serum since Dec. 11th, 1895. The first method is apparently that adopted by Roux, but it differs in certain important details from that originally described, and, so far as we are aware, at present carried out. Roux states that the serum supplied from the Institut Pasteur has a strength of from 50,000 to 100,000 times. That is to say, that a guinea-pig which receives one 50,000th part of its weight of antitoxin twelve hours previous to the injection with culture or toxin supports a dose of such culture or toxin capable of killing control animals *in less than thirty hours*. It will be seen at once that the dose of toxin employed by Mr. Bokenham is considerably less active than that specified, and the strength of the antitoxin will be accordingly correspondingly over-estimated. This over-estimation is considerably greater than might be supposed at first sight, as a very much larger dose is necessary to kill in thirty hours than suffices to kill in from forty to fifty-two hours. Moreover, in the method used by Roux, the toxin or culture is injected twelve hours after the antitoxin has been introduced subcutaneously, and the test is the survival of the animal, and not the presence or absence of swelling, as in Behring's method. Granting, however, that the method had been accurately carried out the strengths of the first six samples would be as follows:—1 : 50,000, 1 : 31,800, 1 : 31,000, 1 : 32,500, 1 : 29,300, 1 : 40,500, from which it will be seen that only the first sample corresponds with the claims (1 : 50,000) put forward on its behalf. It is possible, of course, that the method followed in these experiments is not intended to be that adopted by Roux, but if it be not that method we are unable to identify it with any that has yet been described. As regards the strengths estimated by Behring's method, samples of which are given in the last three tables, we need only point out that the estimations of Messrs. Burroughs, Wellcome, and Co.'s serum made by our Commissioners, and recently published in our special report, in no instance approached the standard of 600 units claimed by Mr. Bokenham. We are sorry to have to return so frequently to this question, but the issues raised are of such vital importance to the profession that we cannot allow it to rest until it has been placed on a more satisfactory basis.

THE TRAGEDY ON THE STAGE.

A TERRIBLE tragedy occurred on the stage a few days ago, the result of which was that while one actor lost his life another will for the rest of his days have the memory of the lamentable incident always with him. Stage accidents are much too frequent. With all the complicated machinery that is now used there must necessarily be many mishaps and sometimes serious accidents, but apart from this there are many which might be prevented, some of which are due, as in this case, to the dangerous weapons used, and others to the foolhardy risks which the performers undertake in order "to draw" the public. For the latter class we have not much pity. No doubt the laws ought to be more stringent than they are in preventing people from running undue risks to satisfy a morbid craving for excitement on the part of the public; but, at any rate, the performers in these cases know their own risk and, as a rule, only endanger their own lives. In the former class the circumstances are different, for while those engaged seem to run but little risk in their every-day acting, a simple mistake may end as unfortunately as the present one did. The only way to avoid such accidents as these, which at the same time is the very simplest, is to be sure that no weapons are used on the stage which can cause a serious injury under any ordinary circumstances. In these days of keen competition the public no doubt like everything to be very realistic, and the desire to comply with this wish has altered the nature of stage fights and stage weapons so much that occasionally it is only too real and ends in the death of one of the parties. In this instance the fatal result was undoubtedly a pure accident. The jury, in returning a verdict of death from misadventure, very properly added a rider condemning the use of dangerous weapons on the stage.

SEIZURE OF BAD FISH.

DURING the month of June the enormous quantity of 235 tons of fish was seized and condemned as unfit for food at Billingsgate Market. It is very dreadful to think of such a large amount of food being allowed to go bad when there are so many people needing it; and fish is by no means a cheap food at any time. It is of course no doubt very difficult to keep fish fresh for any length of time, especially during a hot summer, but the fact of so much being unfit for food suggests that there must be some considerable delay in transporting it from the coast. Every possible facility should be given in order that fish may reach its destination with all speed, because in the fresh state it is a food that is much sought after by all classes and one that is very nourishing; but when it has once commenced to get stale it is not only unpalatable, but in many cases positively dangerous to those who eat it, to say nothing of the pecuniary loss which results to the owners.

HASCHISH AND INSANITY.

DR. JOHN WARNOCK, the lately appointed superintendent of the Cairo Lunatic Asylum, has not yet had time to investigate the subject of haschish smoking, being fully occupied with the work of reorganising his hospital; but in a recently issued report, which we notice on page 554, he mentions several interesting matters in connexion with the drug. During the last half of 1895 there were 253 admissions to the asylum, 181 males and 72 females; of these, 3 females and 68 males were reputed to be haschish smokers. It is an undeniable fact that the habit is common all over Egypt. During an hour's stroll in Cairo the visitor can see half a dozen or more shops where haschish forms the chief stock-in-trade. For a small coin anyone can procure a whiff. Dr. Warnock has had to examine a number of so-called haschish cases and has come to the following conclusion, which, however, "will doubtless require to be modified when a larger number of cases have been observed." In quite a considerable number of cases admitted to the asylum haschish is the chief, if not the only, cause of the mental disease; but at present this species of insanity cannot be diagnosed by its clinical characters alone. The usual types of haschish insanity met with in Cairo may be described as follows: (*a*) Haschish intoxication; an elated, reckless state, in which optical hallucinations and delusions that devils possess the subject frequently exist. Sometimes the condition amounts to a delirium, which is usually milder, more manageable, and less agressive than that of alcohol, and exhibits none of the ataxic phenomena of the latter. Recovery takes place in a day or two or less, and the patient usually recognises the cause of his excitement. (*b*) Acute mania. In this type terrifying hallucinations, fear of neighbours, outrageous conduct, continual restlessness and talking, sleeplessnes, exhaustion, marked incoherence and complete absorption in insane ideas

are the prominent symptoms. Such cases last some months and do not always recover. (*c*) Weak-mindedness, with acute outbreaks after each fresh indulgence. These cases are very numerous. While inmates of the asylum such patients are quiet usually and well behaved, and only betray the impaired state of their brains by being over-talkative, easily pleased, lazy, excitable on trivial provocation, unconcerned about the future, and quite willing to remain in hospital for an indefinite period. They exhibit no interest in their relations and only ask for food and cigarettes. When discharged these cases soon return in a worse condition, approaching that described under (*b*). They rush about in an objectless fashion, pouring forth torrents of abuse on everyone they come in contact with, and are unable to obtain any sleep. At one moment they will strenuously deny that they ever smoke haschish and the next will be loud in praise of its wonderful effects. Besides the cases coming within these types there are many others of chronic mania, mania of persecution, and chronic dementia, which are said to be owing to haschish. The relation between the drug and insanity has yet to be determined notwithstanding the labours of the Indian Hemp Drug Commission, whose conclusions may be summed up as follows. The moderate use of Indian hemp has no physical, mental, or moral ill effects whatever. Its excessive use injures the physical constitution and may cause dysentery and bronchitis; it tends to weaken the mind and may cause insanity sometimes; it induces mental depravity and poverty, but rarely crime. The injury caused by excessive use is confined almost inclusively to the consumer and scarcely affects society. It will be interesting, says Dr. Warnock in conclusion of this portion of his subject, to learn whether these views are borne out by observations in Egypt.

NEW YORK PASTEUR INSTITUTE.

THE various antitoxic serums supplied by the New York Pasteur Institute are prepared under the superintendence of Dr. Paul Gibier, who studied under Louis Pasteur and Dr. Roux in Paris. The horses which yield diphtheria antitoxin are inoculated regularly twice a week for over eighteen months, and the strength of the serum is expressed (according to the method in use at the Pasteur Institute in Paris) as being such that 1 c.c. of it will immunise a body weighing up to 100 kilo (220 lb.) or 100,000 times the weight of the serum injected; it is put up in bottles containing either 5 c.c., 10 c.c., or 25 c c., camphor being added to prevent deterioration. In ordinary cases 10 c.c. are injected when the disease is suspected and before the diagnosis is absolute, and the remaining 15 c c. after a period of twelve hours. Diphtheria antitoxin is also prepared as a dry powder, which is said to preserve its antitoxic qualities and to resist deterioration for an indefinite length of time. When required for use, the one gramme of powder in the vial is dissolved in 10, 15, or even 25 c.c. of sterilised water. The ordinary diphtheria antitoxin sometimes fails to produce the expected results, the reason of which in most instances is that the infection is mixed, the diphtheria bacillus being associated in the false membrane with the streptococcus. The New York Pasteur Institute has, however, following Marmorek's method, succeeded in producing a new double antitoxin, a serum which is efficacious against both diphtheria and streptococcus infection; this result has been attained by immunising horses against streptococcus virus after they had been already protected against diphtheria. A period of one year is necessary to immunise a horse against streptococcus, an immunising power of about 1 : 30,000 being reached. Tetanus antitoxin is supplied only as a dry powder—three grammes in a 25 c.c. bottle, which, when an injection is to be made, is filled with sterilised water and shaken until the contents are dissolved. Dr. C. F. Zimmerman of Amsterdam, New York, has published in the American *Medical Record* an instance of the successful use of this antitoxin. The case occurred in May, 1895, and was believed by the author to be the first of the kind in America. In August, 1895, Dr. Wray Grayson, using the same serum, also obtained gratifying results, which he communicated to the Washington Medical Society; and Dr. C. F. Willington has reported another case in the *Boston Medical and Surgical Journal*.

THE ANTAGONISM OF CHLOROFORM AND HYDROCYANIC ACID.

THE *Journal of Comparative Pathology and Therapeutics* for June contains an article by Professor Hobday, in which he undertakes to show some very remarkable points of antagonism between prussic acid and chloroform. In the lower animals chloroform kills by narcotising the respiratory centre, and as hydrocyanic acid is at once an excitant of the centre, and a very rapid one, Professor Hobday decided to test how far it could be relied upon in cases in which breathing had failed through the action of chloroform. He further sought to discover whether chloroform would prove effectual as an antidote to poisoning by hydrocyanic acid. In the first series of cases thirty-one animals, dogs, cats, a sheep, a calf, and a horse, were from various causes in grave peril from chloroform given to enable operations to be performed. The respiration had ceased and the animals were *in extremis*. Various doses of Scheele's acid were injected subcutaneously, and artificial respiration was practised. For animals which are mouth-breathers the acid is placed on the back of the tongue from a teat and dipper. With regard to the dose, it has to be adjusted to the size and general state of the patient, for while a full medicinal dose is requisite an excessive one is of course highly perilous. Professor Hobday suggests one minim of Scheele's acid for every seven or eight pounds weight of body substance. A second dose should not be given until it is certain that the first is fully eliminated. Dealing with the question, how far can the recovery of these animals be considered due to the acid and how far to the artificial respiration, the writer of the paper says: "I am convinced that the use of the acid gives an enormously higher proportion of successes." A number of cases are also quoted in which the acid failed. In one instance the delay in adopting restorative measures was certainly the cause of death, while in most of the others it seems probable that the quantity of the acid administered was excessive. A further series of cases is given showing the antidotal power of chloroform in poisoning by prussic acid. Whatever the value of Professor Hobday's researches may be—and we admit he has made a strong case—it cannot be denied that there is a danger unless great care is exercised, lest the patient saved from a Scylla should fall into a Charybdis.

TABES AND SYPHILIS.

IN a recent number of the *Berliner Klinische Wochenschrift* Erb contributes an article which has been evoked by the publication of some recent statistics by Leyden apparently intended to show that the connexion between syphilis and tabes was by no means constant. Erb's views, as is well known, are quite opposed to such a doctrine, and he holds that the connexion between syphilis and tabes is a very close, if not a constant, one. Leyden's figures are analysed by his pupil Storbeck and they comprise 108 cases. Of this number 69·4 per cent. are said to have developed tabes without any preceding syphilis. Erb criticises these figures, pointing out that the number considered is far too small for statistical purposes, and

further that 52 of the cases—33 women and 19 men—are cases occurring among the lower classes. As is generally recognised, negative evidence of the occurrence of syphilis in the lower classes, or of its occurrence in women of any class, is not to be relied upon. Erb himself adduces evidence gathered from a consideration of 200 cases of tabes occurring among men in the upper classes. Of these 15 had no evidence of infection, 123 had had undoubted secondary syphilis, while 62 had had chancres but no secondary symptoms. Of the 62 who had only chancres 25 had either an undoubted hard chancre or had been subjected to anti-syphilitic treatment on account of the suspicious character of their condition. Further, of the 15 in whom there was no evidence of syphilitic infection 11 could not be regarded as above suspicion on account of the occurrence of one or more attacks of gonorrhœa in some, repeated miscarriages by the wives of others, and such like, so that out of the 200 cases there were really only 4—i.e., 2 per cent.—in whom syphilitic infection could, as far as that is usually possible, be excluded. If any further proof were needed of the close dependence of tabes on syphilitic infection we venture to think that these statistics of Erb will furnish it.

THE PORTSMOUTH MEDICAL UNION.

WE have received from the Portsmouth Medical Union the report of the committee for the year 1895-96, dated Midsummer, 1896, and this record of a first year's work must be considered very satisfactory. Not only have material successes been obtained for some of its members, but the Union has, in the opinion of the committee, "been the means of bringing together many medical men in friendship and goodwill, when before they were strangers to, or at enmity with, each other. It is gratifying to note," the report continues, "that nearly every practitioner in the borough has given his support to the Union, and that the example set in Portsmouth has been followed in several other towns. The increase in subscriptions in several friendly societies has been one of the chief results of the year's work; several members having already considerably benefited by it, and there are several societies now considering the demand for higher medical subscriptions. The committee believe that the short black list already issued has been found very useful, but must point out that unless members will send in their lists of debtors this record must necessarily be incomplete. It is obvious that much remains to be done, but, if members will take the advice of their representatives and act in combination, the committee feel certain that they will be able to achieve still further successes during the coming year. Many comparatively well-to-do patients are receiving medical relief for a merely nominal sum. This is the greatest abuse from which the profession suffers, and this will receive the first consideration from your representatives." The report, of which we quote nearly the whole, is commendably brief and yet touches on all the points urged by us in our series of articles entitled "The Battle of the Clubs." Local combination has in Portsmouth been already the means of arresting many of the abuses we noticed in our articles, and promises to effect further good.

IS A BURNING SHALE HEAP A NUISANCE?

JUDGMENT in a very important case has been given lately by his honour Vice-Chancellor Hill sitting in the Chancery Court of Lancashire at Manchester. The case was that of the Attorney-General *v.* the Chamber Colliery Company, Limited. The action was brought on the information of the Oldham corporation and the hearing of it lasted six days. The plaintiffs sought to obtain an injunction to restrain the defendant company from permitting any fumes, vapours, or gases to be emitted from land at their Albert Colliery, Hollins-road, Oldham, to the nuisance or injury of the inhabitants of the neighbourhood. It is needless to say that there was evidence on both sides. Mr. Bailey, D.Sc., Ph.D., Lecturer on Chemistry in Owens College; Mr. Tattersall, the medical officer of health of Oldham; Dr. Niven, medical officer of health of Manchester, and a number of the inhabitants in the neighbourhood testified to the injurious character of the emanations. But Mr. Orsman, F.C.S., public analyst of Wigan and Southport; Dr. Harris, medical officer of health of the Chorley urban and rural sanitary authorities, some other medical men practising near the collieries and a number of residents said that no harm could result from the emanations. The Vice-Chancellor in his judgment stated that if there were any nuisance it was the duty of the corporation to protect the public at all costs by proving it to the satisfaction of the court. If that were so proved the injunction must go even though the effect was such as to stop the defendants' business. On the other hand, the defendants said they were a business company carrying on business in a manufacturing district and that no nuisance was committed. They further pointed to the calamitous consequences that would follow if the injunction were granted; they would be compelled to close their colliery and a large number of employés would be thrown out of work. The emanations were described as having a nasty, sulphurous smell and it was stated that they produced most deleterious results on anybody who breathed them; whilst, on the contrary, a number of very respectable witnesses, who said they had lived in the neighbourhood for years, affirmed that they had never been troubled by the smell. The facts were that there were a colliery and a heap of burning shale which had gone on for forty or fifty years, and it was not till 1893 that complaints were received in the matter, and at this time the corporation thought there was not sufficient evidence of nuisance to justify them in taking action. At the same time Dr. Niven, then the medical officer of health of Oldham, had written a letter in 1892 to the colliery company saying that a dangerous and offensive nuisance existed or was being committed by them. Yet after that he and his committee decided that there was not evidence of a nuisance. Judgment was given for the defendants, but without costs. This is a very important decision and one not encouraging to sanitary authorities. Surely, if a burning brick kiln can be considered a nuisance—and it has been decided so over and over again,—then a burning shale heap giving off the same products of combustion must also be a nuisance in a thickly populated district.

"ROENTGEN RAYS IN OPHTHALMIC SURGERY."

IN an article with the above title by Dr. Lewkowitsch published last week in our columns a method of applying the Roentgen rays to the discovery of foreign bodies in the eye was given. It is not surprising that an effort should be made to utilise these rays for the discovery of foreign bodies in the eye, although the difficulties that present themselves are considerable. It is, of course, exceedingly difficult, if not impossible, to take photographs through the whole thickness of the head either in the sagittal or transverse direction, and the eye is so deeply ensconced in the orbit, the bony walls of which obstruct the passage of the rays, that the method can only be used with any prospect of success in cases where the opaque object is situated in the fore-part of the eye. Still Dr. Lewkowitsch has shown that with a little ingenuity and by taking advantage of the rolling movements of the eye a larger region than might be anticipated can be brought under observation. The number of cases in

which this method can be applied is, of course, limited in another way—viz., by the surgical conditions present which are quite peculiar to the eye. When the fragment of metal or other missile is large the eye is usually irreparably damaged and its removal is imperative; when, on the other hand, the object is very small it seems to be doubtful whether any indication of its presence could be obtained. The Roentgen rays would seem to be most likely to prove serviceable in the recognition of shot or other moderate-sized fragment of metal or of glass embedded in the anterior portion of the sclerotic or in the vitreous, especially if surrounded by blood. Such cases are extremely difficult, if not impossible, to diagnose by any means which up to the present time are at the disposal of the surgeon. Dr. Lewkowitsch deserves much credit for the ingenuity of the method he has devised for the application of these rays, and especially for the arrangement of the apparatus by which double images can be obtained and the exact position of the foreign body determined. The original photographs, it is due to Dr. Lewkowitsch to say, show the images much better than is possible in the reproductions by means of process blocks.

THE FUTURE OF THE ABERDEEN SCHOOL.

IN his address to the graduates at Aberdeen University on July 27th the Principal, Sir William Geddes, took a survey of the past achievements of that school and augured favourably from them as to its future. If, he legitimately argued, with the scanty resources previously at her command, Aberdeen has put forth such eminently satisfactory results, what may we not expect from her when the extension scheme (already described in THE LANCET and steadily advancing to completion) shall have placed her on more even terms with her hitherto better-equipped rivals? Thanks to local benefactors, conspicuous among whom stands forth the late Mr. Mitchell, she has doubled her old teaching accommodation and furnished the various laboratories with means of research. One-third of the scheme yet remains to be accomplished, but Sir William Geddes was able to show from the response already made to academic appeals that by April 2nd, 1900—just four centuries after the foundation-stone of King's College was laid—the coping-stone of completion will be placed upon the younger college. On all this the Principal enlarged with justifiable pride and exhorted the young graduates to improve upon the achievements of their predecessors, and, while themselves proud of their *alma mater*, to make their *alma mater* equally proud of them. Judging by the energy with which Aberdeen University has surmounted obstacles apparently insuperable we can share his hope that to the bulk at least of his young audience he will not have spoken in vain.

THE SURVIVAL OF TYPHUS FEVER.

TYPHUS fever has long been the reproach of Liverpool. Though greatly reduced in its proportions it still lingers there in spite of all the efforts of the sanitary authorities. It looks, indeed, as if students of this disease would soon have no other field for its observation. It is disappearing in Ireland. Doubtless Glasgow could still supply a few cases. But in the hospitals of the Metropolitan Asylums Board of London last year there were only 3 cases, all in the Eastern Hospital; all the patients happily recovered. In any general hospital of London it is a veritable rarity, but in Liverpool the disease still has a habitation and a name. There were last year in the city, according to Dr. Hope's report, 162 cases, of which 24 died. Even in Liverpool the increasing rarity of it makes diagnosis difficult, especially in the dirty and dark conditions under which the poor in Liverpool live. The first cases, it is said, usually occur among children. The symptoms are obscure and the eruption much covered and concealed. The ages at death of the cases were as follows: from two to five years, 2; from five to ten years, 1; ten to fifteen years, 1; twenty to thirty years, 1; thirty to forty years, 8; forty to fifty years, 8; fifty to sixty years, 1; and sixty years and upwards, 2.

THE STATE AND ANTITOXIN.

THE question addressed last week in the House of Commons to the President of the Local Government Board by Mr. Harry Samuel serves to show how slow this country is to move in certain directions affecting the public weal. The query related to the use of the antitoxin of diphtheria and was based upon the recent report of THE LANCET Commissioners.[1] It will be remembered that this report showed conclusively that there was a great variation in the potency of the various samples that are to be procured in this country, and as it is now proved that the best results are only to be obtained by using antitoxin of full strength it seemed only right that some means should be provided whereby the antitoxin supplies should be tested and standardised before being allowed to be sold. Such a duty would, of course, have to be undertaken by a central authority, and our Commissioners, who strongly urged this procedure, pointed out that in Germany there is a State institution for this very purpose. However, Mr. Chaplin turned a deaf ear to the arguments in favour of such a course being adopted in this country, sheltering himself under the plea that the department of which he is the official head had only to do with the prevention of disease and not with its treatment. This is all very true, but we fail to see why it is not considered to fall somewhere within the function of the State to safeguard the people in a question of primary importance to their welfare. The prophylactic treatment of diphtheria with antitoxin surely comes within the purview of the President of the Local Government Board. In this respect its influence is quite as marked as in the case of vaccination. Diphtheria is becoming the most widespread of infectious diseases, and it is one of the most deadly. The light which scientific investigation has thrown upon its nature has revealed a method of averting its worst effects, provided that the remedy employed be of suitable quality. From the knowledge at present obtained it is beyond dispute that lives have been saved by the right use of this remedy. It follows that if it be wrongly used lives which would otherwise be rescued must be sacrificed. The State, in its care to prevent disease, can take no heed of the ravages that disease produces once it has gained a footing. It is none of its concern that a remedy should be freely used in a condition in which it is known to be comparatively ineffective when by a slight extension of its sphere of action a Government department could ensure uniformity and safety in the method employed.

THE HEALTH OF THE BRITISH TROOPS IN INDIA.

WE are extremely glad to notice that the gravity of the present position is fully appreciated by the Government, and that an inquiry is about to take place—probably by a small committee constituted of independent persons—with a view of ascertaining the amount of preventable contagious disease in India, and whether any steps can be taken to remedy it. Everybody admits that the extent of the evil in the British Army in India is already enormous and that it shows signs of increasing. There is unfortunately, however, a good deal of dispute as to what should be done. It is contended, on the one hand, that the increase of

[1] THE LANCET, July 18th, 1896.

venereal disease in the European Army is entirely attributable to the abrogation of the Contagious Diseases Acts in India, and that the first thing to be done is to restore this system of legislation. On the other hand, it is alleged by some of those who have no sympathy with the opponents of the Acts that the system had proved a comparative failure in India and that its reintroduction could not consequently be recommended on sanitary grounds. While we recognise the practical difficulties attending the application and working of legislative measures in India in this direction we nevertheless believe that the system previously in force was not as efficiently carried out as it might have been. If we are warranted in trying to prevent or limit the spread of such diseases as small-pox or scarlet fever, we are certainly justified in endeavouring to do so in the case of syphilitic disease. Every other country has recognised the correctness of this view and adopted repressive measures, and if our previous attempts in India in this respect were inadequate to cope with the evil others must be tried. We repeat that we are therefore glad that the subject is about to receive attention.

ANOTHER GLOUCESTER OBJECT LESSON.

IN the daily press of last Saturday, which contained copious extracts from the report of the majority of the Vaccination Commission, there also appeared an item of news of singular significance in face of the conclusions at which the Commission is said to have arrived. This was a statement to the effect that on the previous day at Gloucester a public demonstration had been held by anti-vaccinationists to welcome the release from prison of a defaulter under the Acts. It is not, perhaps, so much a matter of surprise that this should happen in Gloucester, where, after a suspension of ten years, the law is now being enforced, for during this period the anti-vaccination crusade has been, as we all know, most vigorously conducted, and there must be many in that city to whom compulsory vaccination must seem a thing to be resisted to the death. But what is indeed surprising, nay, more, profoundly disheartening, is the fact that those people who have suffered so much from the disease, which vaccination prevents and mitigates, should nevertheless seize the first opportunity to show that this bitter lesson has been taught them in vain. We are told that the defaulter in question was in the service of the Midland Railway Company, and that the crowd which accompanied him in his progress through the streets contained many of the employés of this company in their uniform. What makes the affair more shameful still is the notorious fact that in this recent epidemic, of the two great railway companies whose lines converge at Gloucester, the servants of the Great Western Railway Company hardly suffered at all, whereas the disease was rife amongst the Midland men, the fact being that the former company required their men to be re-vaccinated, whilst the latter declined to put any pressure upon them at all. Let us hope, for the sake of human nature, as well as our belief in the intelligence of such men, that none of those who took part in this demonstration (which, of course, may have been largely based on the personal popularity of the offender) had suffered in their own families from the visitation of small-pox. It would, indeed, be incredible if any man, whose home had been recently decimated by reason of his own perversity in failing to secure for his children protection from the plague which smote them down, could be so wilfully and grossly blinded by unreason as to continue in the delusion he hitherto held. Have the wives of such men and the mothers of those dead children no voice in the matter; and is there no sense of shame amongst the people of Gloucester to permit such an exhibition of heartlessness and ignorance to be made in their midst? It is said that Gloucester has been converted by its recent object-lesson, but we await for some overt sign of this "conversion" which shall prove to the world that the vast majority of its citizens no longer have part or lot with those whose baseless propaganda have been the direct cause of so much misery and death.

POISONOUS FOOD.

EVERY year presents a more or less alarming tale of obscure cases of poisoning by food, and the present year bids fair to "beat the record." There can be no doubt that in some instances poisoning could have been avoided by taking advantage of the abnormal appearance, taste, or smell frequently evinced by unsound foods, although these characters are not always a certain indication of unfitness. It is to be feared, however, that poor persons, by reason of their impecuniosity, are often led to partake of what they have bought although it may be distinctly objectionable, as from their point of view to reject it would be waste. On the other hand, there is reason for believing that food which is apparently, to the senses of sight, taste, and smell, free from objection, may prove to be injurious. In these cases it is difficult to suggest how the danger can be avoided. The poison is probably a ptomaine, the product of the action of certain bacteria upon nitrogenous substances. The ptomaines closely resemble the amines and in this way bear some relation to the poisonous alkaloids. Their action is quite distinct from that of food such as milk or ice cream which has been exposed to unhealthy surroundings, to sewer emanations, or to some other source of pollution. Fatalities due to the consumption of unwholesome ice cream are of comparatively common occurrence. At Bradford last week a number of persons were taken ill, all of whom recovered, however, except a boy. In the evidence given in the coroner's court it appears that the retailer of the ice cream admitted the cream was sour, but it was also shown by an inspector that there was a seriously defective drain in the shop. Instances of true ptomaine poisoning are afforded in two cases recently reported, one from Crawley in Sussex and the other from Liverpool, in both of which rabbit-pie was undoubtedly the *fons et origo mali*. Ptomaines were also probably responsible for some cases of "poisoning by potted meat" also reported from Liverpool on Aug. 14th, in which severe gastro-enteritis was the principal symptom. A whole family were seriously affected and the eldest child is reported to be in a critical condition.

INFECTIOUS DISEASES IN MACCLESFIELD.

MACCLESFIELD seems to be rather unfortunate in its methods of dealing with infectious disease. Apparently it possesses only one small hospital for the reception of such cases, and in this building there is no provision for isolating one kind of infectious disease from another. Consequently the majority of cases arising in the town have to be dealt with in their own homes and many cases have hitherto been attended by the house surgeons of the infirmary. Some doubts of the wisdom of this custom arose in the minds of the governors of the infirmary, and on July 6th, 1896, they—or at least the house committee—appealed to the members of the medical staff for their opinion on the subject. On July 16th, 1896, the medical staff replied that they saw no reason why the house surgeons should not attend infectious cases. At a meeting of the governors on Aug. 8th the whole question came up again and it was finally decided that the matter should be left in the hands of the house committee, where as a matter of fact it was before. It was argued at the meeting that the honorary medical staff visited infectious cases in their private practice and then saw cases in the infirmary and that, therefore, the

house surgeons might do the same; but to our mind the cases stand on a totally different plane. A house surgeon has to inspect all his cases at least once every day—has to do a number of dressings and minor operations with an occasional one of greater gravity, and thus has far greater opportunities of conveying infection. Perhaps the simplest way out of the matter would be to prohibit the house surgeon, or indeed any member of the staff, from visiting in his capacity of infirmary medical officer any patients at their own homes. These might well be left to the ordinary practitioner and the parish medical man. Of course this might send up the rates, but it would be cheaper than an epidemic; and if this "impasse" teaches the Macclesfield authorities the need for a proper isolation hospital good will come out of a seeming evil.

TYPHOID FEVER AND RAIN AT BEYROUT.

DR. DE BRUN, of the French Faculty of Medicine at Beyrout, has issued a report on the serious epidemic of typhoid fever which has afflicted that town. The epidemic commenced suddenly in October, 1895, and only ceased at the end of the spring of this year. It appears that during the summer of 1895 numerous cases of typhoid fever were observed in various villages situated in the valley of the Nahr-el-Kelb where flows the river which supplies drinking-water to the town of Beyrout. On Oct. 14th Dr. de Brun relates that there occurred a remarkable storm. Torrents of rain fell throughout the district. In less than half an hour the streets were converted into rivers and the water rushed by with such force that some children were carried away, thrown into the sewer mouths and drowned. Two men also lost their lives in the flood. From the mountains that surround Beyrout water came sweeping down into the river. The dejecta of the inhabitants of the surrounding villages, which are simply thrown out on the soil, followed the current, and thus brought the germs of typhoid fever from the villages to the river. Ten days after the storm the fever broke out in Beyrout. There were cases in all quarters of the town. By Nov. 1st it was estimated that there had been from 6000 to 7000 cases. This is so large a figure that the Beyrout epidemic may be considered as one of the most recent and striking illustrations of the danger that results from the absence of an effective system of drainage. The epidemic conveys no new lesson, but it very forcibly emphasises what is already known. A similar occurrence in London would mean something like 50,000 cases of typhoid fever in a week. At Beyrout the cesspools were flooded, and their contents, diluted by the rain-water, were conveyed in all directions. This, together with the specific germs brought down from the outlying villages, where cases of typhoid fever are known to have previously occurred, may account for the wide-spread nature of the epidemic. In most Eastern villages there is no provision for drainage. The earth is the usual purifier, and where the population is not large the sunshine, the air, and the earth ultimately render the filth recklessly thrown out quite innocuous. But if there is a sudden down-pour of rain the filth is carried away before it is purified. It may thus contaminate a neighbouring water-supply and result in such an epidemic as that which has recently affected Beyrout.

COMPLAINT AGAINST A HOSPITAL AUTHORITY.

OUR attention was drawn to two paragraphs dealing with the above subject in our contemporaries the *Morning Post* and the *Daily News* of the 12th inst., and we have investigated the charges thus brought to the notice of the public. This was, perhaps, less necessary than usual, as a letter from the medical officer (really censured by the jury, with the coroner's assent) was published on the following day in the former journal and put quite a different aspect on the occurrence. Nevertheless, we have inquired fully into the circumstances of the case, and place the more important facts before the profession. The evidence given was that the man the cause of whose death was the question before the court had been taken to St. Thomas's Hospital early on the morning of July 31st by the police to be treated for a scalp wound caused through falling on Waterloo Bridge. The house surgeon on duty, Mr. Conford, dressed the wound but did not consider it advisable to admit the man. The patient left the hospital in charge of the police, but was brought back to the hospital about two hours later, having been run over in the street. The injuries then received proved fatal. The coroner made some remarks and treated the house surgeon with scant courtesy, saying that *the man would not have been killed if he had been admitted*, and the jury returned a rider to the verdict to the effect: "We consider the deceased ought to have been admitted to the hospital, and his death was due to the neglect of the hospital authorities in not admitting him." On the first occasion when he was seen at the hospital there is evidence that the man was partially intoxicated and that the scalp wound was not sufficiently serious to make it necessary or advisable to admit him. Our readers will recognise the condition in which hospital wards would be on a Saturday night if this combination led to admission in all cases. The post-mortem examination subsequently proved that Mr. Conford was quite right in his estimate of the severity of the case. There had been no injury to the skull or its contents. The man left the hospital in the custody of the police, who agreed to secure a night's lodging for him. He was, however, permitted to leave their care before being placed in safety, and in crossing a road was run over by a railway van. All these facts ought to have been ascertained during the inquiry. If anyone is to blame it is surely the police, who ought to have taken the man to the station. It is no part of the duty of a hospital to take charge of drunken men who, as in this instance, can walk for a considerable distance without help. There are persons who apparently go out of their way to cast mud on charitable institutions and hamper them in their work. We cannot understand the spirit which prompts such a proceeding. A public apology should be offered to the house surgeon whose conduct was so wrongfully condemned.

WE congratulate Dr. Francis Richard Cruise upon the knighthood conferred upon him by Lord Cadogan last week. Sir Francis Richard Cruise was President of the Royal College of Physicians of Ireland in 1884 and is consulting physician to the Mater Misericordiæ Hospital of Dublin and Consulting Visitor in Lunacy in Ireland.

THE Queen has sanctioned the appointment of Surgeon-Major-General James Jameson, M.D., Director-General of the Army Medical Department, to be a Knight of Grace of the Order of the Hospital of St. John of Jerusalem in England.

Pharmacology and Therapeutics.

EUROPHEN AS A SUBSTITUTE FOR IODOFORM.

DR. EDMUND SAALFIELD gives an account in the *Therapeutic Gazette* of the properties of europhen and its advantages over iodoform. Europhen is in the form of a fine yellow powder, with a faint, saffron-like odour, and contains 28·1 per cent. of iodine. In the dry state it is permanent, but on contact with water and alkaline fluids it liberates small quantities of iodine. As a result of his experiments Dr. Saalfield thinks that this drug is to be looked upon as the best substitute for iodoform which at present exists, for it is neither toxic nor odoriferous, and its application to inflamed skin causes no irritation. On account of this non-irritating property it is said to be useful in various dermatological conditions, such as varicose ulcers

with eczematous margins, impetigo, and it has also proved very useful in intertrigo of children. A serviceable formula for this latter affection consists of talc with the addition of from 5 to 10 per cent. of europhen and 5 per cent. of anhydrous lanoline.

THE CLINICAL APPLICATIONS OF BENZOSOL.

Dr. Kofron describes his experience of this drug in the *American Therapist* of June, 1896. The drug is chemically pure benzoate of guaiacol containing approximately 54 per cent. of the latter reagent. It occurs in the form of a finely granular powder entirely devoid of taste or odour, and being practically insoluble is best given in the form of powder, pill, or capsule. Benzosol passes unchanged through the stomach, and is split up into its component parts (benzoic acid and guaiacol) by the alkaline juices of the intestine, and on this account its use is not followed by the unpleasant eructations which are apt to occur after the administration of pure creasote or guaiacol, while at the same time the liberation of the guaiacol in the intestine gives the full benefit of its antiseptic action. The conditions for which this drug are chiefly recommended are pulmonary tuberculosis, tuberculous diarrhœa, chronic bronchitis, and chronic gastric catarrh, and it has also been used in typhoid fever. In conclusion Dr. Kofron expresses his belief that in benzosol we have a drug which is a valuable substitute for creasote in pulmonary affections, a safe and efficient intestinal antiseptic for the treatment of gastro-intestinal disorders attended with fermentation, and a useful remedy for the purpose of sterilising the bowel in typhoid fever.

TREATMENT OF ALOPECIA AREATA.

Dr. Brocq recommends the following prescriptions. Resorcin, 1½ grains; hydrochlorate of quinine, 3 grains; and pure vaseline, 1 ounce. This is to be applied to that part of the scalp from which hair is falling, but only a limited area is to be covered at one application. If the hair still falls off from 15 to 20 minims of tincture of cantharides may be added, or in other cases sulphur may be introduced into the ointment as: resorcin, 3 grains; hydrochlorate of quinine, 5 grains; precipitated sulphur, 30 grains; and pure vaseline, 1 ounce. If these ointments produce too much irritation of the scalp, after their removal a simple ointment consisting of 20 grains of borax to 100 of vaseline may be used. If the loss of hair be associated with seborrhœic eczema it is often well to apply a mercurial ointment.

CALCIUM SULPHYDRATE AS A DEPILATORY.

The use of this drug, CaH_2S_2, was recommended by Dr. Brayton at the recent meeting of the American Medical Association at Atlanta. It is best prepared by passing sulphuretted hydrogen gas through a thick cream of well-slaked lime until the lime will absorb no more of the gas. It takes about two hours to make a pint, and the operation should be conducted in a fume chamber or in the open air. Dr. Brayton applied it to the arms of several students with success, and stated that it is often used by surgeons to remove hair from parts to be operated upon. It is recommended that an application should be made about once every three weeks to remove hairs that may be returning.

THE TREATMENT OF BURNS.

Dr. Poggi has found that the addition of a few teaspoonfuls of potassium nitrate to a bath, into which the burnt part is plunged, will quickly cause cessation of the pain. After a time the water becomes heated and the pain returns, but again subsides on the addition of another quantity of salt. Professor Vergely has obtained good results by covering the burnt parts with a paste prepared by mixing calcined magnesia with a certain quantity of water and allowing it to dry on the skin, renewing it as soon as it becomes detached. Under this treatment it is said that the wounds heal well and pain is prevented.

CERIUM OXALATE IN THE CRISES OF TABES.

Professor Bechterew has been using cerium oxalate in cases of gastric crises of locomotor ataxy and reports marked success from this treatment. The seizures of vomiting were greatly reduced in number, while the actual act of vomiting became easier and at the same time pain, thirst, and nausea were, to a great extent, diminished. The psychic conditions also improved, restlessness subsided, and sleep returned. Micturition is said to have become slightly more difficult, but not enough to require a catheter. The most important improvement, however, was that food could be retained owing to the diminished number of paroxysms of vomiting.

THE BRITISH DENTAL ASSOCIATION.

THE annual general meeting of the British Dental Association was held on Aug. 12th, 13th, 14th, and 15th at the Examination Hall, Victoria-embankment, London. From every point of view the meeting was a distinct success, due in a very great measure to the excellent arrangements which had been made by the executive committee. The members and visitors were entertained at a conversazione on Tuesday evening by the Metropolitan Branch of the Association, the business of the meeting commencing on Wednesday, Aug. 12th. At the morning sitting the retiring President, Mr. Bowman Macleod, read his valedictory address, Mr. Canton, the new President, following with an inaugural address, which dealt chiefly with the subjects of dental education and dental politics, and which will be found on another page of our present issue. The sixth report of the committee on the Condition of the Teeth of School Children was next read and adopted, and the following resolution was unanimously passed: "That the British Dental Association regrets that there is no mention of teeth or dentistry in the recent report of the Departmental Committee of the Local Government Board on Poor-law Schools, although its attention had been called to the matter by statistics and by the evidence of a Local Government inspector, and that the Association is strongly of opinion that the importance of the care of children's teeth, especially those of the wage-earning classes and the poor, should receive immediate attention by the Board of Guardians and other authorities; and, further, that all such dental appointments should be made on similar lines to those regulating medical appointments, and therefore subject to inspection by the Local Government Board." In the afternoon two papers of interest were read by Mr. G. Cunningham on Some Experiments in Bridge Work and Mr. Sidney Spokes on the So-called Honeycombed Teeth. In the evening the President and Mrs. Canton gave a reception at the Royal College of Surgeons of England, the use of the buildings having been graciously granted by the Council of the College. The proceedings on Thursday, Aug. 13th, commenced with a meeting of the Benevolent Fund. The report presented was of an encouraging nature and showed that the work carried out by the committee during the past year had been of a most useful character. At the general meeting which followed Mr. Alfred Woodhouse read a paper on Reminiscences of Fifty-four Years in the Dental Profession. He dwelt on the many changes he had seen take place in the practice of dentistry, and his paper is a further proof, if such were needed, of the immense strides the operative side has made during the last fifty years. Mr. C. S. Tomes followed with a paper entitled Notes on Dentinal Tubes and their Relation to other Channels and Spaces in Dentine, while Dr. Stack of Dublin contributed some notes on Touch Bulbs in Dentine The afternoon was devoted to demonstrations. The microscopical section also held meetings, and papers were read by Mr. D. E. Caush and Mr. Mummery. An interesting series of skiagraphs of teeth was exhibited by Mr. F. J. Bennett, and microscopical sections and photo-micrographs were shown by various members taking part in the work of the section. In the later part of the afternoon a garden party was given by Mr. and Mrs. Mummery at the Manor House, Southall.

The morning of Friday, Aug. 14th, was devoted entirely to demonstrations, the majority of which were of a valuable and practical character. Attention seemed to be principally centred on the adaptation and manufacture of porcelain crowns, and the use of a new form of gold known as "Sohla Gold." The demonstrations formed, perhaps, the most attractive part of the meeting, and the committee are to be congratulated on the very efficient way in which this portion of the programme was carried out. In the afternoon a paper was read by Mr. Constant on the Mechanical Factor in the Eruption of the Teeth hitherto unrecognised. He advanced the theory that the blood pressure was the active mechanical factor, basing his conclusions on the examination of a large number of post-mortem jaws. This concluded the technical part of the meeting, the remainder of the sitting being devoted to passing the usual formal votes of thanks. The annual dinner of the Association was held in the evening at the Hôtel Métropole, a large company assembling, including Mr. Christopher Heath, Mr. H. T. Butlin, Mr. H. Allingham, Mr. G. D. Pollock, Mr. W. Rivington, Mr. E. Trimmer,

Mr. W. G. Spencer, Mr. J. Bland Sutton, Dr. Murray, Dr. Ward Cousins, and Dr. Glover. The last-named proposed the toast of "The British Dental Association," and in the course of his remarks pointed out the great assistance that the medical profession had received from dentists. He also stated that he considered the time had arrived when the dental profession should be directly represented on the General Medical Council. Mr. J. Smith Turner responded and expressed his thanks for the encouragement and support which the dentists had in the past received, and were in the present receiving, from the medical profession. Other toasts followed, including "The Royal College of Surgeons of England" and "The Benevolent Fund."

The final day of the meeting—namely, Saturday—was devoted to an excursion up the river to Richmond, and as the weather was fine the trip proved to be of a most enjoyable character and put a pleasant finishing touch to the most successful meeting as yet held.

REPORT ON THE MORTALITY IN ENGLAND AND WALES DURING THE TEN YEARS 1881-90.[1]

II.[2]

IN these days the familiar term "death-rate" is too often employed carelessly by otherwise well-informed persons without any definite notion of its true meaning. The term properly signifies the annual proportion which the deaths in a given population bear *to the numbers living* in the same area, the ratio being usually expressed as so many annual deaths in each thousand of the estimated population. It is popularly used to express the relative healthiness or unhealthiness of different communities; but, as we have previously had occasion to point out, this use of the term is likely to lead to serious error unless due caution be observed. We are, therefore, pleased to note that the question of local death-rates in relation to the conditions under which they may legitimately be compared is fully discussed in the report before us.

By the expression "uncorrected" or "crude" death-rate is ordinarily meant the annual rate of mortality calculated from population and deaths without reference to sex or to age. It is useful as a rough means of comparing the sanitary condition of the *same place* in successive years provided that no serious change has taken place in the age constitution of its population; but in comparing the death-rates of *different places* the use of uncorrected rates is to be deprecated unless it has been previously ascertained that the several populations are similarly composed as regards age and sex. To take, by way of illustration, an extreme case. Amongst the inmates of a workhouse infirmary containing only aged people one would expect to find a normally heavy death-rate, but if the same rate were found to prevail amongst the boys of a training-ship it would be considered scandalous and a public inquiry would be promptly demanded. Comparison would, of course, scarcely ever be instituted between communities so differently constituted as the foregoing, but Dr. Tatham adduces a recent illustration, taken from the English counties, which shows that this liability to error is a real one. Comparing the case of Norfolk with that of Lancashire, it is found that the population of the former county contains relatively fewer persons from fifteen to forty-five years of age and relatively more aged persons than does that of the latter. At the last census this disparity was found to be so great that it would be necessary to remove from each 1000 of the Norfolk population 68 persons above forty-five years of age and to replace them by an equal number from fifteen to forty-five years old in order to assimilate the two populations in respect of age. As the death-rate at ages from fifteen to forty-five years does not generally exceed 9 per 1000, whilst that of persons above forty-five may be stated as more than four times that amount, a simple calculation will show that the above-mentioned substitution of young adults for old people in the Norfolk population would reduce the death-rate of that county by more than 2 per 1000 living. It is, therefore, futile to compare the crude death-rate of different districts unless the populations are known to differ but inconsiderably as regards their age-constitution. If, however, it can be ascertained what the mortality of a given place would have been had the population at the various age-groups been subject to the death-rates incidental to those ages in another place, the mortality of the two places will have been reduced to a common basis; and if the local mortality can be still further corrected by reducing them to the uniform standard basis supplied by the age distribution of the entire English population, they will be rendered strictly comparable with one another. In order to show the importance of this correction Dr. Tatham gives a list of ten towns whose crude death-rates do not differ by more than 0·1 per 1000, and which therefore would appear to be about equally healthy if judged by these rates alone; but when their mortality is adjusted for differences of age-constitution of population the rates are found to range between such extremes as 16·6 and 21·9 per 1000. Some idea may be formed of the magnitude of the labour involved in the preparation of this report when it is stated that the death-rates of every one of the 632 registration districts as well as of the 43 counties of England and Wales have been adjusted in the manner above indicated, the corrected rates appearing in the several tables under the title "rates in standard population"; comparison may safely be made between these corrected rates, which may be accepted as fairly accurate tests of local sanitary conditions. In addition to the inherent defect in crude death-rates, to which allusion has already been made there are other difficulties that are connected with the data on which death-rates are based. For example, the existence in a district of a hospital receiving patients from outside places causes over-statement of the mortality of the district containing the hospital and a corresponding under-statement of that of the areas from which the patients are derived. Again, the difficulty of correction is even greater in the case of places containing a large proportion of domestic servants. As long as health lasts these persons are counted as inhabitants of the places in which they are employed, but in the event of illness they return to their homes in the country and their deaths are not reckoned against the town in which their working life has been spent. In this way the mortality of well-to-do localities is often much understated. There are also difficulties which are connected with estimates of population, but their elucidation would involve intricate calculations which would be out of place in these columns.

A review of the considerable and almost uniform diminution in the death-rate which is known to have taken place in the decennium last completed suggested the expediency of constructing another English Life Table for the purpose of ascertaining definitely the amount of increase in the average lifetime enjoyed by each unit of the population since the year 1880. Accordingly Dr. Tatham has published in his report a New Life Table for England and Wales, based on the mortality in the ten years 1881–90. This table shows the numbers surviving at each year of life out of a million males and a million females born, and also the "expectation of life" at each age, and a supplementary table shows the life expectations according to the Life Table of 1881–90, as compared with those according to the Life Tables for 1838–54 and 1871–80 respectively. In Dr. Ogle's decennial supplement, published in 1885, it was shown that the expectations of life among males by the life table then published were higher than those by the 1838–54 table for ages below nineteen, and lower at all subsequent ages. The present life table shows improved expectations of life, compared with those of the earlier tables, up to twenty-six years of age; from age twenty-seven to age forty-four the expectations are lower than those of the first table, but higher than those of that of 1871–80; whilst for ages forty-five and upwards the expectations of life are lower by the new table than by either of the others. The survivors at age forty-five out of a million males born, according to the earliest life table, will live on the average 22·76 years each; according to the second life table they will live 22·07 years each, and according to the new life table an average of 22·06 years. It is held by authorities on vital statistics that the national value attaching to increased life expectation in a community varies considerably, according as the additional expectation does or does not take place

[1] Supplement to the Fifty-fifth Annual Report of the Registrar-General of Births, Deaths, and Marriages in England. Part I., by John F. W. Tatham, M.A., M.D. Dub., Superintendent of Statistics, General Register Office. London: Eyre and Spottiswoode. Edinburgh and Glasgow: John Menzies and Co. Dublin: Hodges, Figgis, and Co. 1896. Price 3s. 6d.

[2] No. I. was published in THE LANCET of Aug. 8th, 1896.

within the working period of life—namely, from about the twentieth to the sixtieth year. It is, therefore, satisfactory to observe that the average number of years lived between these limits of age by each male born are 20·92, 22·00, and 23·56 years respectively, according to the three successive life tables; an increase in the working period of life has therefore been shown within the last two decennia, amounting to an average of more than a year and a half for each male in the population. Among females the expectation of life at birth, which had been 41·85 years and 44·62 years respectively in the two earlier tables is further increased to 47·18 years in the new table. The expectations of life at the several ages up to 54 years are greater by the new life table than by either of its predecessors. At all ages beyond 45 the expectations of life are less by the new table than by either of the earlier tables. The average number of years lived between the ages of 20 and 60 years by each female born according to the three life tables are respectively 21·65, 23·48, and 25·12 years.

(To be continued.)

FOUNDER'S DAY AT EPSOM COLLEGE.

THERE was a large gathering of members of the medical profession at Epsom College on July 27th, when Founder's Day was celebrated and the prizes won by the students during the past term were distributed. The head-master, the Rev. T. N. Hart Smith, presided, and was supported on the platform by, amongst others, Dr. Wilks, President of the Royal College of Physicians of England; Sir William MacCormac, President of the Royal College of Surgeons of London; Sir Joseph Fayrer, Chairman of the Council of the College; Dr. Holman, Treasurer; and the Rev. E. W. Northey, Vice-Chairman of the Council. The chairman reported that there had been continued and uninterrupted progress and success. The health of the students had, he said, been excellent, with the exception of an epidemic of measles and mumps, imported last term, which had given considerable trouble. With that exception they had had a completely clear bill, and for some time past there had not been a boy in the infirmary. The discipline had been satisfactory, which was due to the example set by the seniors and prefects, and there were external signs of the prosperity of the College as a whole. It was hoped that the new College buildings would be ready for occupation at the beginning of next year, when all the lower school boys would be at once transferred. He was quite sure that it was a step in the right direction to sever the seniors from the juniors, as they intended to do. The new part of the chapel would be opened next term and they hoped soon to provide the chapel with a new organ, one more worthy of the building and of their excellent organist, Dr. Rowton. He thanked the masters of the College for having worked so cordially and for the help they had given in the games which were no unimportant part of the school life. Under the captaincy of Mr. Newsome the rifle corps was in a flourishing condition and a large company was going into camp at Aldershot. Only recently the corps had beaten another school at shooting. The cricket eleven had been distinctly successful, having won eight matches. The average of the captain (Chesnall) was 48, and he deserved special mention, as he could throw a cricket ball and kick a football further than any other boy who had ever been at that College.

Alluding to the large number of examinations open to the pupils at the College, Mr. Hart Smith spoke of the consequent tax that it was upon the masters, and expressed a hope that when the Government took in hand the question of secondary education some steps would be taken to systematise the examinations in the country so that boys in going through their collegiate career could do so in a uniform way, and so that the master could know what to be prepared for and what teaching to give. The prizes were then distributed, the Wakley prize—a cheque of £20—going to Lauton. The list of distinctions showed that E. J. L. Davies had gained an open scholarship for classics at Magdalen College; H. W. R. Thompson, a sizarship for natural science at Sidney-Sussex, Cambridge; and P. H. Kealy had passed twenty-first in the Royal Military Academy at Woolwich. A large number of Oxford and Cambridge certificates had also been obtained, and several old pupils passed the London matriculation examination last January. Dr. Holman proposed a vote of thanks to Dr. Wilks and Sir William MacCormac for their attendance, and in response both expressed themselves as greatly pleased with what they had seen. Afterwards a sale of work was held in aid of the new organ fund. Over £500 is required, and towards that a sum of over £330 has been collected by the school.

THE BROOK HOSPITAL, SHOOTER'S HILL.

THE first of the three new permanent infectious diseases hospitals which are being built by the Metropolitan Asylums Board was opened for public inspection on July 31st. The visitors were divided into four groups and each group was escorted by a guide through the various parts of the building, but so numerous were those who came to inspect the hospital and so hurried was the examination that criticism is impossible. We therefore take the following notes from an illustrated pamphlet with which each of the visitors was supplied.

The site contains twenty-nine acres, of which twenty-one acres are actually used at present for the purposes of the hospital, leaving eight acres of surplus land available for temporary wards during epidemics. It stands 200 feet above the level of the sea, and falls rapidly to the south from Shooter's Hill-road, thus enabling the several buildings to be arranged in terraces, sheltered from the north and east winds, and with lovely views to the south and west across a large tract of country. Accommodation is provided for 488 patients, classified as follows: scarlet fever, 352; enteric fever and diphtheria, 112; isolation wards, 24, a total of 488 in all. The staff of the hospital will comprise a medical superintendent, 5 assistant medical officers, matron, steward, housekeeper, engineer, 196 nurses, 92 female servants, 24 male servants, making, with a few others, a total of 325. The general plan of the hospital has been arranged upon the principle of keeping the administrative buildings as separate and distinct as possible from the wards and their appurtenances. By this arrangement the nurses and others of the staff, when off duty, will be free from the ordinary hospital surroundings. In furtherance of this principle there are two entrances to the hospital, both overlooked from, and controlled by, the same porter's lodge. One is the "infected entrance," and one is the "non-infected entrance." The former leads to the receiving wards, ward pavilions, laundry, and other infected parts of the hospital. The latter leads to the official block, general stores, medical superintendent's house, nurses' home, &c. By this arrangement outsiders having business to transact at the hospital, such as the delivery of stores, &c., can, by using this entrance, enter and leave the hospital without coming in contact with any infection.

In general arrangement the administrative buildings are placed in front or to the north of the site, facing Shooter's Hill road, the rear or southern portion being occupied by the ward pavilions, the axes of which are as nearly as possible north and south. There is a roadway round the whole of the site, so as to cut off the hospital from the surrounding property.

The wards are warmed by means of (*a*) open ventilating fire-places and (*b*) low-pressure hot-water apparatus. The open fire-places are supplied with fresh external air, which after being warmed passes into the ward. The flues are descending ones, and the stoves are enclosed in dwarf cases in Burmantoft faience, thus avoiding the erection of vertical chimneys rising through the ward and obstructing the nurses' view of the patients.

The low-pressure hot-water warming apparatus consists of cast-iron pipes under the ground-floor, circulating to and from a steam heater in the basement. From these pipes branch circulations rise to radiators in the wards. These radiators each consist of a number of copper spiral coils enclosed in an easily cleanable iron case, having open gratings on top and in front. These cases are placed against the external walls under the windows, and the fresh external air is admitted through glazed channels regulated by valves, and, after being warmed by impinging upon the copper coils, is admitted into the ward. In this respect, as in the case of the fire-places, warming is combined with ventilation. In addition to the inlet ventilation already described in connexion with the warming apparatus, there are valvular

gratings in the external walls under each bed at the floor line, and the windows (one to each bed) are on opposite sides of the ward. The ordinary double-hung sashes are supplemented by hopper-hung fanlights.

There are two means of exhaust ventilation to each ward in addition to the open windows—viz. (*a*) open fire-places and (*b*) vertical shafts. There are four open fire-places to each ward, and these form, undoubtedly, the most effective form of exhaust ventilation. These are supplemented by vertical shafts 14 in. square internally and lined with salt-glazed bricks with rounded internal angles. There are three to each ward, and an upward current is generated in each shaft by means of a copper steam coil. Two connexions with each shaft are made in each ward (one at the floor line and one at the ceiling line), and valvular gratings are provided in each opening, so regulated by hand gearing that when the upper one is open the lower one is closed, and *vice versâ*.

The cost of the hospital, including all fittings, apparatus, and machinery, but exclusive of land and furniture, has been £240,000. The outlay has been increased by the peculiarities of the site and also by the situation of the hospital, which is at the extreme edge of the metropolitan district, very inaccessible for materials, and equally so for workmen.

THE CAIRO LUNATIC ASYLUM.

IN his annual report for 1890 Sir Evelyn Baring (now Lord Cromer) wrote as follows: "The lunatic asylum in its former condition was described by a competent authority as 'a den to shudder at, where the wretched inmates used to be chained to the walls, never leaving their cells till they were carried out dead.' It is now in perfect order and is provided with padded rooms, workshops, and gardens." The Consul-General was unquestionably justified in passing this high encomium, but although several improvements had obviously been effected much still remained to be done before the sole lunatic asylum in Egypt could claim to be ranked as a first-class establishment. As Rogers Pasha remarked in his report for 1892, "the Government lunatic asylum is structurally very defective, and considerable alterations must be made if it is to fulfil the purpose for which asylums are intended. At present it is a home for the insane, but hardly a hospital for their treatment. Classification and separate accommodation are impossible on the female side without a radical alteration of the building." Up to this time reform was carried out on general principles, but at the beginning of 1895 permission was at length accorded for the engagement of a properly qualified alienist, who was to devote his services exclusively to the asylum. This gentleman, Dr. Warnock, has how issued his first report, which we have much pleasure in recommending to all students of lunacy. The document is in pamphlet form, occupying sixty-two pages, and was printed at the National Printing Office, Cairo. The new superintendent was not long in discovering that numerous defects existed in the establishment which had been placed under his charge, some of the more important being (*a*) the absence of a proper classification of the patients; (*b*) general disorder in the whole hospital, especially at meal-times; (*c*) a want of proper medical records; (*d*) the use of mechanical restraint; (*e*) absence of systematic occupation; (*f*) a high rate of mortality; and (*g*) structural defects. This is certainly a formidable list, but Dr. Warnock was not dismayed, and by the end of the year (to quote our Egyptian correspondent) it was really wonderful to witness the peaceful revolution that had been accomplished. Under the new *régime* the number of inmates has gone up considerably. Formerly they never exceeded 300 in all, but during 1895 the daily average number was 465, of whom 325 were males and 140 females. In the course of the year 526 patients were admitted, upwards of half of them coming from Cairo and the remainder nearly all from the larger towns, the rural districts supplying merely a fractional quota. According to the census of 1882 there are only 7 certified lunatics in Egypt per 100,000 of population, the proportion in England being 310 per 100,000. Dr. Warnock is of opinion that "only a small proportion of the insane in Egypt are ever sent to hospital," and adds, "evidently female lunatics are usually kept at home, even in the larger towns"; but he also admits that "it is at present quite impossible to even approximately gauge the extent to which lunacy prevails in the country generally." No doubt harmless lunatics are in some instances kept in their homes, but Egypt is now constantly traversed by English sanitary inspectors, to say nothing of police, irrigation, and preventive officers, and it is difficult to understand how the more violent cases could be systematically kept in concealment. Dr. Warnock bases his conclusion that in Egypt female lunatics are usually kept at home on the ratio between the sexes in English asylums, but the conditions of life in the two countries are so different that his deductions would seem to be by no means inevitable. The general health of the inmates is not good. "Internal parasites affect nearly every patient, anchylostomas, ascarides, and tapeworms being found at nearly every autopsy. Bilharzia also is very common." Melancholia is extremely rare among natives of Egypt. Five per cent. of the admissions were due to this form of insanity, but nearly all the sufferers were foreigners. The alcoholic insanities are seldom seen, and suicidal tendencies are well-nigh unknown. General paralysis of the insane, also, is not common, the admission-rate for the year having been under 3 per cent. In connexion with the latter affection Dr. Warnock makes the following remarks: "The idea that sexual excess and syphilis are important agents in the causation of general paralysis is not strengthened by these observations, since both these causes have free play in Egypt and yet apparently little general paralysis results. The Egyptians are usually easy going and are not subjected to over-work or strains, nor are they often addicted to alcohol. I think it is these factors which are wanting for the causation of general paralysis. Possibly as Egyptians become more civilised and their life more complex, general paralysis will become more frequent." The ameliorations introduced into the Cairo Lunatic Asylum under Dr Warnock's intelligent supervision are very great; but that he is still far from satisfied is evident from his final observations: "In finishing this hurried sketch of the work of the past year I cannot refrain from again mentioning the serious obstacles to the proper administration of the hospital still existing, chiefly due to its structure, situation, and want of space. In time many of these drawbacks will doubtless be removed or obviated, though nothing less than re-building is required to render the institution thoroughly adapted to the necessities of its inmates." We certainly think that the Egyptian Government would find it cheaper in the long run to build an entirely new asylum. With the example of Kasr-el-Aini before their eyes they should not be slow to recognise the fact that patching up an old and unsuitable structure for hospital purposes must inevitably prove to be an expensive and unsatisfactory procedure.

THE SOUDAN CAMPAIGN.

THE news fom the Nile Expedition is very satisfactory as regards the health of the troops and the absence of cholera; but the service is a very trying one. The river has been steadily rising, and everything is being prepared on the Nile for an early advance. It appears that the Dervishes having heard of the late appearance of cholera in the expeditionary force regard it as a manifestation of Divine opposition to the expedition. It is generally believed that the disease will advance to Dongola, but nothing is yet known of its having done so or of its having appeared in the Khalifa's army. Although the cholera outbreak has ceased in the Anglo-Egyptian force this is by no means the case as regards Egypt itself, where the epidemic has of late shown signs of slight increase. There were 567 fresh cases and 502 deaths returned for three days last week, and at that time the total number of cases reported since the beginning of the outbreak had amounted to 17,453 cases, of which 14,498 were fatal. Later returns show that there were 397 fresh cases and 357 deaths in Egypt during two days towards the end of last week. Four deaths occurred at Cairo, 3 in Alexandria, and 36 in Keneh. One death occurred among the Egyptian troops at Wady Halfa. The heat at Kosheh has been very great, the thermometer registering on one day, according to a telegram through Reuter's agency, 130° F. in the shade.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6529 births and 4146 deaths were registered during the week ending Aug. 15th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 24·8 to 21·4 per 1000, further fell last week to 19·9. In London the rate was 19·7 per 1000, while it averaged 20·1 in the thirty-two provincial towns. The lowest rates in these towns were 13·0 in Huddersfield, 13·7 in Bradford, 14·3 in Swansea, and 15·4 in Halifax; the highest rates were 23·5 in Manchester, 24·2 in Birmingham, 26·9 in Portsmouth, and 27·1 in Wolverhampton. The 4146 deaths included 1009 which were referred to the principal zymotic diseases, against 1560 and 1202 in the two preceding weeks; of these, 625 resulted from diarrhœa, 117 from measles, 86 from whooping-cough, 84 from diphtheria, 52 from "fever" (principally enteric), and 41 from scarlet fever. The lowest death-rates from these diseases were recorded in Halifax, Birkenhead, Swansea, and Plymouth, and the highest rates in Gateshead, Hull, Brighton, Portsmouth, and Wolverhampton. The greatest mortality from measles occurred in Derby, Brighton, Oldham, Portsmouth, and Gateshead; from scarlet fever in Oldham; from whooping-cough in Cardiff, Salford, West Ham, and Huddersfield; from "fever" in Sheffield; and from diarrhœa in Bolton, Brighton, Portsmouth, Norwich, Preston, and Wolverhampton. The 84 deaths from diphtheria included 59 in London, 7 in Birmingham, 6 in West Ham, and 3 in Liverpool. No fatal case of small-pox was registered in any of the thirty-three large towns. There were 22 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 15th inst., against 37, 28, and 22 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 6, 0, and 5 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3368, against 3207, 3279, and 3369 on the three preceding Saturdays; 378 new cases were admitted during the week, against 321, 360, and 366 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 142 in each of the two preceding weeks, declined to 135 last week, and were 39 below the corrected average. The causes of 48, or 2·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Bradford, Leeds, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Leicester, Salford, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 18·3 to 15·4 per 1000, rose again to 16·1 during the week ending Aug. 15th, but was 3·8 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 7·0 in Leith, and 12·6 in Greenock to 20·5 in Perth and 20·7 in Paisley. The 469 deaths in these towns included 28 which were referred to diarrhœa, 20 to measles, 11 to whooping-cough, 9 to diphtheria, 3 to scarlet fever, and 2 to "fever." In all, 73 deaths resulted from these principal zymotic diseases, against 93 and 80 in the two preceding weeks. These 73 deaths were equal to an annual rate of 2·5 per 1000, which was 2·4 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined in the three preceding weeks from 51 to 37, further fell to 28 last week, of which 13 were recorded in Glasgow, 6 in Dundee, and 4 in Edinburgh. The deaths referred to measles, which had been 33 and 16 in the two preceding weeks, rose again to 20 last week, of which 17 occurred in Glasgow and 2 in Dundee. The 11 fatal cases of whooping-cough were within 2 of the number in the preceding week, and included 8 in Glasgow and 2 in Paisley. The 9 deaths from diphtheria considerably exceeded the number recorded in any recent week, and included 3 in Dundee, 2 in Glasgow, and 2 in Edinburgh. The fatal cases of scarlet fever, which had been 3 and 5 in the two preceding weeks, declined again to 3 last week. The 2 deaths referred to different forms of fever showed a further decline from recent weekly numbers. The deaths from diseases of the respiratory organs in these towns, which had been 68 and 70 in the two preceding weeks, declined again to 59 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 35, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·4 and 24·0 per 1000 in the two preceding weeks, further declined to 21·6 during the week ending Aug. 15th. During the past seven weeks of the current quarter the death-rate in the city has averaged 24·9 per 1000, the rate during the same period being 21·7 in London and 15·3 in Edinburgh. The 145 deaths registered in Dublin during the week under notice included 25 which were referred to the principal zymotic diseases, against 31 and 38 in the two preceding weeks; of these 16 resulted from diarrhœa, 4 from scarlet fever, 4 from enteric fever, 1 from whooping-cough, and not one either from small-pox, measles, or diphtheria. These 25 deaths were equal to an annual rate of 13·7 per 1000, the zymotic death-rate during the same period being 4·7 in London and 1·9 in Edinburgh. The fatal cases of diarrhœa, which had been 22 and 29 in the two preceding weeks, declined again to 16 last week. The 4 fatal cases of scarlet fever exceeded the number recorded in any recent week. The deaths referred to enteric fever, which had been 2 and 3 in the two preceding weeks, further rose to 4 last week. The mortality from whooping-cough was below that recorded in any recent week. The 145 deaths in Dublin last week included 42 of infants under one year of age, and 30 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from the numbers recorded in recent weeks. Six inquest cases and 4 deaths from violence were registered; and 30, or more than a fifth, of the deaths occurred in public institutions. The causes of 12, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

THE following Brigade-Surgeon-Lieutenant-Colonels to be Surgeon-Colonels:—James Lane Notter, M.D., vice T. F. O'Dwyer, M.D., promoted; and Henry Comerford, M.D., vice J. L. Notter, M.D., seconded for service as Professor of Military Hygiene at the Army Medical School. Surgeon-Lieutenant-Colonel Peter John McQuaid, M.D., retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Lieutenant C. R. Bakhle has been appointed to act as Civil Surgeon, Jacobabad, in addition to his own duties; Surgeon-Captain S. E. Prall has delivered over charge of the Karwar Gaol; Brigade-Surgeon-Lieutenant-Colonel S. M. Salaman and Surgeon-Captain J. Jackson have respectively delivered over and received charge of the Yerrowda Central Prison. The services of Surgeon-Captain Bawa Jiwae Singh (Bengal), are placed temporarily at the disposal of the Chief Commissioner of Burma. Surgeon-Captain G. F. W. Ewens (Bengal) whose services have been placed temporarily at the disposal of the Government of the Punjab, is appointed to officiate as Superintendent of the Multan Central Gaol.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Alexander Duncan Fraser, M.D., to be Surgeon-Major. Surgeon-Lieutenant Arthur David Ducat, 1st London Volunteer Rifle Corps, to be Surgeon-Lieutenant.

YEOMANRY CAVALRY.

Berks: Surgeon-Lieutenant J. H. Waters, M.D., to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 6th Lancashire: William Hughes Murdoch, M.D., to be Surgeon-Lieutenant (dated Aug. 19th, 1896.

Rifle: 3rd Volunteer Battalion the King's (Liverpool Regiment): John McMullen, M.B., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the East Lancashire Regiment: Surgeon-Captain T. Milne, M.D., resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 1st Volunteer Battalion the King's Own (Yorkshire Light Infantry): William Kitson Clayton, gent., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Duke of Cambridge's Own (Middlesex Regiment): The resignation of Surgeon-Captain H. G. G. Wilkins, which appeared in the *London Gazette* of March 24th, 1896, is cancelled. 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders: Surgeon-Lieutenant J. Macdonald, M.B., to be Surgeon-Captain. 18th Middlesex: Surgeon-Captain H. Baldwin resigns his commission.

VOLUNTEER INFANTRY BRIGADES.

South Wales Brigade: Surgeon-Lieutenant-Colonel C. P. Skrimpshire, 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers, is appointed Brigade-Surgeon-Lieutenant-Colonel.

ARMY AND INDIAN MEDICAL SERVICES—COMPETITIVE EXAMINATIONS.

The following are the lists of successful candidates for Commissions in the Medical Staff of Her Majesty's Army and for the Indian Medical Service at the recent examinations held in London:—

ARMY MEDICAL SERVICE.

	Marks.	Relative marks under old scale.
G. E. F. Stammers	3018	3159
C. F. Wauhill	2843	2681
W. E. Hudleston	2345	2666
M. P. Corkery	2254	2402
L. Addams-Williams	2215	2346
M. M. Rattray	2209	2195
F. J. Gaine	2102	2336
J. H. Power	1979	2199
R. E. Phillips	1959	2177
E. W. Bliss	1934	2138
W. E. P. V. Marriott	1926	2139
T. H. M. Clarke	1907	2076
J. G. Berne	1804	2005

INDIAN MEDICAL SERVICE.

	Marks.		Marks.
A. A. F. McArdle	3005	G. A. F. Sealy	2546
J. M. Woolley	2988	J. A. Hugo	2526
C. A. Lane	2903	R. Bryson	2418
W. H. Kenrick	2740	E. F. E. Baines	2391
T. B. Kelly	2595	R. H. Price	2383
C. H. S. Lincoln	2560	C. H. Watson	2366

MAIDSTONE COMPANY VOLUNTEER MEDICAL STAFF CORPS.

Ninety-four members of this Company attended the encampment with the Regular Forces at Gosport from the 1st to the 8th inst., Surgeon-Captain C. Pye Oliver, M.D., commanding. The members of the Transport Branch were marched to Colewort Barracks, Portsmouth, daily for a special course of instruction by the Army Service Corps, while about thirty of the other members were detailed daily for duty in the Station Hospital with the Medical Staff Corps. The instruction given at both the barracks and the hospital was of a very beneficial character and much appreciated by the members. On Friday Surgeon-Major-General E. C. Markey, C.B., Principal Medical Officer, Southern District, inspected the Company in marching order and expressed himself well pleased with the work done. Referring to his own past services he remarked that the young officers now in the Army Medical Service might hope to some day have the assistance and help of the Volunteer Medical Staff Corps, which he himself should have been glad of on more than one occasion.

Surgeon-Major-General James Jameson, M.D., Director-General of the Army Medical Department, has been appointed, with the Queen's sanction, a Knight of Grace of the Hospital of St. John of Jerusalem in England.

ON Wednesday afternoon next, Aug. 26th, there will be at the Chemists' Exhibition, Argyll-street, London, a special display of articles in which medical men are interested.

THE Middlesex Hospital has received a donation of £500 from Baroness de Hirsch.

Correspondence.

"Audi alteram partem."

DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—May I ask for the privilege of saying that I feel proud and grateful for the high honour the practitioners in Scotland have done me in being twice chosen as their direct representative on the General Medical Council, and that I mean most respectfully to solicit their suffrages again? There will be time enough to state at length my views on medical politics before the vacancy occurs in the representation. Meantime I may be allowed shortly to explain that I have always been in favour of an increase of popular representation on the Council, and that I am against any legislation which would open a door to a new order of midwifery practitioners, and that I shall (as I have hitherto done), if elected, do my best to discourage all trade pandering to clubs and medical aid associations.

I am, Sirs, yours truly,

Dingwall, Scotland, Aug. 18th, 1896. WILLIAM BRUCE.

To the Editors of THE LANCET.

SIRS,—I take it for granted that the vast majority of those Members of the Royal College of Surgeons of England who have passed into the age of reason have already made up their minds to vote for Dr. Glover and Mr. Walter Rivington as their direct representatives upon the General Medical Council. We still, however, require a suitable third candidate; for although we are solicited for our suffrages by some four or five other members, yet I hope I may say without offence to either of them that their turn has not yet come and that they can well afford to wait at least a little longer. Our third candidate should be a gentleman of assured professional position, of mature judgment, of experience, of leisure, of tact and courtesy, and, above all, one who is innate with the principle of ethics in its widest and its etymological sense—in short, a true-born gentleman. There are, no doubt, many such amongst those who, having passed the burden and heat of their professional day are now enjoying the *otium cum dignitate* to which they are justly entitled, and who, thus relieved from the worries, cares, and distractions of busy practice, are now able to consider calmly, deeply, and justly the varied needs and tendencies of medical life and progress at the present day. To most of us several such names will probably occur, but, without being invidious to any of the others, I would venture to suggest as a most eligible candidate Mr. Joseph White, F.R.C.S. Edin. If this gentleman would do us the honour of coming forward I doubt not he would, as in the case of Dr. Glover and Mr. Rivington, command an overwhelming majority of our votes; and in those three gentlemen we should, I venture to think, be well and worthily represented on the General Medical Council.

I am, Sirs, yours obediently,

JOHN INCE, M.D. St. And.,
Her Majesty's Indian Medical Service (retired).

Swanley, Kent, Aug. 17th, 1896.

"THE GENERAL MEDICAL COUNCIL: CRITICS AND CANDIDATES."

To the Editors of THE LANCET.

SIRS,—The importance of a correct understanding of the powers and duties of the General Medical Council will, I trust, afford me an excuse for endeavouring to reply to your correspondents of last week.

I think my friend Dr. Alderson underrates his personal influence as much as he overrates that of the Council or of any single member of it. I feel sure that the chief impediment to satisfactory legislation on medical subjects arises from the imperfect way in which these subjects are apprehended by legislators; and that, as I suggested in my former letter, it should be our business to "educate our masters." We are so familiar with the questions at issue that we are apt to lose sight of their complexity, and to

suppose that truths which are obvious to us must be obvious also to the rest of mankind. This is far from being the case; and the profession has at present no organisation by which the truths in question can be brought home to the comprehension of the public. In the absence of organisation something may at least be attempted by individual effort, and a man of temperate and sagacious mind, who comes into personal contact with his parliamentary representative, may reasonably hope to succeed in inducing that representative to regard medical matters from the point of view of the profession itself. Would it not be worth while for Dr. Alderson to try the experiment, and to ascertain whether General Goldsworthy might not from the first be an interested and receptive listener, and ultimately a convert to the opinions submitted to him? For the success of any such endeavour it would be essential to avoid the error of under-estimating practical difficulties, and the teacher should regard an abuse as a giant to be circumvented rather than as a dwarf to be overthrown.

Dr. Alderson's views about a physical examination fail to convince me, and I think he will see on reflection that his proposal would not work. There must be persons of greater and of less efficiency in every calling, the differences being due to variations sometimes in physical and sometimes in intellectual capacity. How would it be possible to draw the line? Among eminent medical men lately deceased I am able to call to mind two who suffered from defective hearing, but who nevertheless won and held high positions, and rendered admirable service to hospitals, to pupils, and to the public. A youth who is heavily handicapped by physical defect will be likely to avoid the profession of medicine, and we have all seen instances in which a slight defect has been an incentive to effort and has wrought far more than its own compensation. And, with regard to the far more important question of mental defect, what board could be trusted to say that a lad aged eighteen might be a soldier, a sailor, or a clergyman, but that he was just a little too stupid to be a doctor? I hope Dr. Alderson may be prevailed upon to reconsider his opinions upon this part of the question.

I turn to Professor Horsley, who appears to me to be suffering from an acute attack of what I may venture to call "morbus criticorum"—a malady of which the chief symptom is the intense dislike of the critic to be criticised. His letter is liberally sprinkled over with uncomplimentary verbiage which I think I can afford to disregard, but he goes on to say that I "insult my brethren the general practitioners." I utterly deny and repudiate the accusation. I was a general practitioner for eighteen years, have had large and varied experience of the shoes incidental to that division of the profession as well as of the points at which they pinch, and have the most complete possible sympathy with all who now wear them. I challenge Professor Horsley to find in my letter a single word or phrase which, read in connexion with its context, insults anybody; and I call upon him as a man of honour, when he has failed to find such word or phrase, to withdraw his injurious imputation as publicly as he has made it. He next says that I "misinterpret the terms" of the Act of 1858; that I "indulge myself by styling, without offering reasons, the views of Dr. Drage and himself as balderdash"; and that being "only the representative of the Apothecaries' Hall" I am "not responsible for my utterances." It would surely be useless to "misrepresent the terms" of an Act which anybody can read who pleases, but, as this is by far the most important of the accusations brought against me, I will deal with it before considering the others.

As regards Section 40 of the Medical Act, it visits with a fine not exceeding £20 any unregistered person who shall be convicted of wilfully and falsely taking and using any title which implies that he is registered. It casts no duty of prosecuting upon the Council and leaves it open to anyone to institute proceedings for the enforcement of the clause. The Council has no more power or duty in the matter than Professor Horsley himself, or than any other private citizen, but, like any private citizen, it is at liberty to set the courts in motion. For many years, and for valid reasons, the Council declined to be a prosecuting body, but it has lately thought fit to take proceedings under Clause 40 in one or two instances, mainly, I think, in order that the familiarity of its legal advisers with the questions at issue might assist in obtaining convictions at the hands of unwilling magistrates, and so might lead to the establishment of precedents. Clause 42, which gives the penalties to the Council, and so would do something towards paying the expenses of prosecutions, is inoperative in the metropolis, in which a large proportion of the cases occur, being overriden by the Metropolitan Police Act. I do not think it would be proper for the Council to devote more than a small amount of money to the prosecutions in question, which can now be undertaken successfully by anyone who is aggrieved.

Professor Horsley says that I "wish apparently to convey that the Legislature in 1858 extended its 'recognition' as far as the tacit approval of quackery." He is perfectly correct. With the substitution for the word "quackery" of the words of the Act itself—namely, "unqualified practitioners"—he states exactly what I do wish to convey and what is the simple truth. Professor Horsley must remember that the Act of 1858 was passed when he was hardly of an age to take any deep interest in legislation, whether medical or general; whereas I had not only been six or seven years in practice, but had been writing pretty continuously for medical journals, and had therefore been favourably situate for knowing the history of the Act. Repeated attempts were made to obtain the insertion of clauses for the punishment and repression of "unqualified practitioners," but neither House of Parliament would listen to them, nor do I believe that they would listen to similar clauses now. In 1858 few surgeons in London had a larger practice among the governing classes, the Legislature, and the persons who constitute what is called "Society" than the elder Hutton, the "bone-setter," and I well recollect a member of Parliament laughing at one of the proposed prohibitory clauses, and feeling that he had sufficiently demonstrated its absurdity when he said—"Why, it would stop Hutton!" The governing classes of England have always encouraged quackery, both within and without the profession, and they always will encourage it until they are taught better; so that it is incorrect to say that, "in the opinion of the Legislature," quacks should be classed with "thieves and murderers." The opinion of the Legislature must be gathered from its enactments; and these, so far, have made no attempt to class quacks in the indicated manner.

I fear that the real head and front of my offending is to be found in the good old English word "balderdash." A grammarian would tell Professor Horsley that my phrase, "this balderdash," referred to the collective antecedent which comprised Dr. Welsford's paper, as well as Professor Horsley's and Dr. Lovell Drage's observations. I did not know that Professor Horsley had himself contributed a paper, and inferred from the report that he and Dr. Lovell Drage had spoken in a discussion. I had before me an alleged wastefulness of opportunities, the reality of which I did not admit, but for which Dr. Welsford, who believed in it, offered one explanation, while Professor Horsley and Dr. Lovell Drage offered a different one. What was I to make of critics who were unable to agree among themselves? The disputable allegation, and the mutually destructive explanations, taken together, constituted "balderdash," a word which means, simply and precisely, "a confused statement," and with this balderdash, as presented in a condensed form in the report, it was impossible to come to close quarters. When Professor Horsley sends me his promised paper I will endeavour, if time permit, to do complete justice to its merits. In the meanwhile I have not attempted to defend Sir Richard Quain, who stands in no need of being defended; and if I have "thrown mud," an act of which I have not been conscious, it is at least certain that I have not "run away." When, if ever, I do run away, it will be from an adversary possessing greater skill in dialectic than Professor Horsley has hitherto displayed.

One word more. A small error in controversial writing is as unsightly as a ragged button on a Court dress. I am not the representative of "the Apothecaries' Hall," which is, indeed, an ancient and interesting building, but which is not referred to in the Medical Acts. I am the representative of the Society of Apothecaries, a chartered corporation whose licentiates in medicine, when the Act of 1858 was passed, constituted about forty-nine-fiftieths of the practitioners of England and Wales. This proportion has been reduced by the competition of other licensing bodies; but the licentiates of the Society are still very numerous, and it is droll to see the self-constituted champion of "general practitioners" endeavouring to discredit the representative of the corporation from which so many of them have obtained their medical qualification. I, at all events, am content with my position, and I am not aware of anything in the Standing

Orders of the Council, or in the charters or constitution of the Society, which relieves its representative from "responsibility for his utterances."

I am, Sirs, yours obediently,

Aug. 17th, 1896. R. BRUDENELL CARTER.

To the Editors of THE LANCET.

SIRS,—It is a pleasure to find that the old Toryism which once was the ornament of England is still existent and has found expression in Mr. Brudenell Carter's letter upon the General Medical Council. He has done me the honour to criticise a statement that I have made to the effect that the history of the Council is one long story of wasted opportunities, and that its failure is due to the fact that it is not representative of the medical profession, and he wishes me to substantiate the same. With regard to the first point, it is notoriously difficult to prove a negative except by showing the absence of a positive, and I may ask Mr. Carter to say first what the Council has done. In his letter he has kindly given what he considers to be the proud record of thirty-seven years of the work of the Council, which consists in the following results: (1) the increase of the medical curriculum from four to five years; (2) the steady elevation of the standard of the preliminary examinations; and (3) the partial prevention of the employment of unqualified assistants, by which I suppose Mr. Carter refers to the fact that the Council has pronounced covering to be infamous. I do not think that Mr. Carter has done the Council justice—it surely has done a little more work than he represents. But taking his figures, no one can fairly contend that it is a very noble record after thirty-seven years, during which time the medical profession has contributed something like £200,000 towards the maintenance of this somewhat inactive body.

Turning to the things left undone by the Council I may point out that certain duties are imposed upon the Council by the Medical Act of 1858. First comes the general supervision of medical education. Power is given to the Council under the Act to compel all examining bodies to bring their examinations up to a standard which shall be considered to be satisfactory by the Council. Failure in this respect entails the penalty that the qualification in default shall not confer any right to be registered under the Act. How has the Council performed this duty? Are there no back doors to the medical profession? Is there no refuge for the poor chronic who fails to pass the moderate test exacted, say, by our English licensing bodies? Had we any doubt as to the answer, we have but to turn to the minutes of the Council to read therein of the sordid disputes which have gone on in the sacred chamber between rival diploma-granting bodies, when we should learn that an examination has to be not only inefficient, but appallingly inefficient, before the Council will take notice of its irregularities. One respected member of the Council has recently stated that the desirable one portal system was not adopted because the universities and colleges were unwilling to resign their rights. The history of the Council, which is mainly composed of representatives (like Mr. Carter's) of these bodies, shows how tenderly these vested interests have been cherished. To them all other rights are subordinated. Unfortunately in the present day we do not care an iota for the vested interests of corporations; we demand efficiency and we look in vain to the Council to enforce it. The second duty is the maintenance of a professional ethical standard, as defined in Sections 28 and 29 of the Act. It will be apparent to anyone who will read these sections carefully that absolute power is given to the Council over all registered practitioners. These sections were, however, a dead letter until the Medical Defence Union goaded the Council into doing their duty. It is, however, a body hard to move. After much exertion it was induced to pronounce covering to be infamous, but it refused to save the public and the profession from such a grave evil as the Medical Aid Association system. By its recent decision it would appear to decide that it is infamous to cover one unqualified person, but innocent to cover more than one. This is weird wisdom. The recent decisions of the Council with regard to the Obstetrical Society are better passed over in silence. The third duty consists in the prosecution of offenders under Section 40. (See also Sections 41, 42, and especially 43.) To every appeal that the Council would carry the Act into execution in this respect it always returned the simple, if somewhat useless, answer of *non possumus*. But at last the Council was induced to pass in December, 1895, a resolution directing its Penal Committee to inquire into cases of persons offending under Section 40, and when it sees fit to instruct the legal advisers to proceed against such persons. We are breathlessly waiting the result.

Surely Mr. Carter cannot complain if I assert that a council of thirty members, of whom twenty-five are appointed by the Crown and various universities and corporations, and only five are elected by the medical profession of the United Kingdom, is not one that can be fairly called markedly representative of the medical profession.

It has always seemed a matter for regret that the Medical Act is not studied by members of the Council, who are appointed by that Act to carry it out. If they would but read it we should hear no more that the only duty of the Council is to keep a register, and that it has no power to enforce its wishes, but that of argument. Let me recommend with due respect the perusal of the Act to the members of the Council. They will find that their powers under the Act for the protection of the public and the profession, so far as medical matters are concerned, are practically unlimited. Finally, while sympathising with Mr. Carter's natural objection to an "agitation" calculated to bring to the surface many actions of the General Medical Council which have hitherto passed unnoticed by the profession, I must regretfully decline to leave off stirring to suit either his convenience or that of any other member of the Council who may desire to leave matters in their present stagnant condition.

I am, Sir, yours obediently,

Dover, August 11th, 1896. A. G. WELSFORD.

"THE RELATIVE STRENGTHS OF DIPHTHERIA ANTITOXIC SERUMS."

To the Editors of THE LANCET.

SIRS,—I have read with much interest the Report of THE LANCET Special Commission on the Relative Strengths of Diphtheria Antitoxic Serums in your issue of July 18th and the editorial comments on the subject in THE LANCET of Aug. 1st. It has been a source of surprise to us in America that so little attention has been given to this phase of the subject in Great Britain and to the necessity for the statement on every phial of antitoxin not simply of the dose of the serum, but of the antitoxin value of each cubic centimetre of the contents. These matters, as you have pointed out, are of pre-eminent importance.

In January, 1895, on the motion of Professor T. Mitchell Prudden and myself, the New York City Health Board adopted an amendment to the Sanitary Code requiring that all preparations of diphtheria antitoxic serum exposed or offered for sale in New York City should bear labels showing the strength in antitoxin of the contents as measured by some generally recognised standard of value. The result of this action has been that nowhere in America, so far as I know, have preparations of antitoxin been sold which do not conform to this requirement, although the action of the New York Health Department in adopting regulations regarding the matter has not been generally followed. Tests of the preparations of antitoxic serum on sale are made in various parts of the United States by the different sanitary authorities to determine their conformity to the strength given on their labels, notably by the Massachusetts State Board of Health and the New York Health Department. I have been much surprised by the low grade of the preparations used in Great Britain. As will be seen by the enclosed circular, so long ago as February, 1895, the New York Health Board discontinued the preparation and use of the "No. 1" and "No. 2" grades of antitoxin (Behring's standard) and added to their list three higher grades, Nos. 4, 5, and 6, containing respectively 200, 300, and 400 units of antitoxin (Behring's standard) in each cubic centimetre. The whole difficulty in the production of high-grade preparations of antitoxin depends upon the production of high-grade toxin solutions, and the latter were rendered easily possible by the method worked out in the New York Health Department Laboratories by Dr Park and Dr. Williams and published in the first number of the *Journal of Experimental Medicine*, edited by Professor William H. Welch, of Johns Hopkins University, Baltimore. I am informed that the results obtained in New York have been confirmed by M. Martin of the Pasteur Institute in Paris, and that Kossell, of the Institute for Infectious Diseases in Berlin, has recently published an article (which I have not seen) describing essentially the same method, not mentioning, however, the

work of Dr. Park and Dr. Williams. The method used in New York has been generally followed in the United States and high-grade preparations are everywhere to be obtained. Within the last two months another preparation, No. 7, has been added to the list furnished by the New York Health Department. This contains 500 units in each cubic centimetre.

It seems unnecessary to refer to the great advantages derived from the use of preparations of antitoxin in which the dose is only three or five cubic centimetres instead of ten, twenty, or thirty cubic centimetres.

I have the honour to remain, Sirs, very respectfully yours,

HERMANN M. BIGGS, M.D.,
Director of the Bacteriological Laboratories of the New
Aug. 13th, 1896. York City Health Department.

"THE RELATIVE EFFICIENCY AND COST OF PLUMBERS' WORK."

To the Editors of THE LANCET.

SIRS,—I am instructed by the Council for Devon and Cornwall of the National Registration of Plumbers (in connexion with the Worshipful Company of Plumbers, London) to thank the Editors of THE LANCET for the article on the Efficiency of Plumbers' Work, and to add that they consider the Commission to have accomplished a step in the right direction on behalf of the public health.

I am, Sirs, yours faithfully.

Plymouth, Aug. 14th, 1896. W. J. ADDISCOTT, Hon. Sec.

ON THE DOSAGE OF SOME OF THE VASOMOTOR DILATORS.

To the Editors of THE LANCET.

SIRS,—May I seek, from the pages of THE LANCET, to gather experience as to the dosology of some of the vasomotor dilators which have of late obtained much attention at the hands of our profession? I had always been very chary in prescribing them in cases in which I could not watch and control their administration; and now I read in the paper on the Diagnosis and Treatment of Cardiac Failure, brought before the recent meeting at Carlisle by Sir T. Grainger Stewart, and its discussion that the dose of nitro-glycerine should range from $\frac{1}{100}$ gr. to $\frac{1}{30}$ gr., the same dose being given in our British Pharmacopœia as one or two tablets of $\frac{1}{100}$ gr. of the remedy. But in the Extra Pharmacopœia of Mr. Martindale, in many ways a highly useful and dependable guide, I find, in reference to nitro-glycerine, the following passage respecting the tabellæ nitro-glycerini, originally introduced by the writer in 1878, and now recognised as official: "The tablets appear to be non-poisonous even to children; a surgeon informed the writer that on one occasion two children, one three and the other six years of age, ate between them, straight away, two dozen, $\frac{1}{100}$ gr. in each, without any injurious effects." The dose of the drug in the book is given as being $\frac{1}{300}$ gr. to $\frac{1}{50}$ gr. or more.

How are we, I would ask, to reconcile this alleged fact of the inertness of these tabellæ in cases of children with the views entertained generally as to the potency of the drug? It might be asked, in the first place, whether some mistake had not existed as to the fact of the children having consumed the number stated of the tabellæ, or whether children respond less to the drug than adults, or, in the last place, whether the tabellæ swallowed were genuine and pure or not? I am, Sirs, yours obediently,

JOHN W. OGLE, M.D. Oxon.

Gloucester-place, Aug. 17th, 1896.

"THE BRITISH MEDICAL BENEVOLENT SOCIETY."

To the Editors of THE LANCET.

SIRS,—At this distance I am unable to communicate with my colleagues on the council of the Royal Medical Benevolent College. I feel persuaded they would agree with me that we should not put forward any claim to the legacy of £50 bequeathed to the "British Medical Benevolent Society" referred to in a letter from a "Country Solicitor" in THE LANCET of Aug. 15th.

The similarity of the term "British Medical Benevolent Society" and that of the "British Medical Benevolent Fund," of which Sir William Broadbent is treasurer, leads me to conclude that this Fund, and not the "Royal Medical Benevolent College," is included in this will.

The committee administering the affairs of the Fund meet at the residence of Sir William Broadbent, 84, Brook-street, W. I am, Sirs, your faithful servant,

C. HOLMAN,
Treasurer to the Royal Medical Benevolent College.
Homburg v. d. Höhe, Aug. 17th, 1896.

THE REMUNERATION OF LOCUM-TENENTS.

To the Editors of THE LANCET.

SIRS,—Now that the "locum" season is in full swing may I ask if you will be good enough to invite discussion on the above question? I have always understood that three guineas a week, with living in, second-class return fare, and expenses was the recognised minimum fee, and have myself always refused to go out at a lower rate. Surely three guineas is a small enough return for the great expenditure of time and money which a man must incur before he can obtain his qualifications! Yet every week in THE LANCET and other medical papers there appear advertisements for locum-tenents at two guineas a week and even less, and frequently offering third-class fare one way only. Some advertisers go even further in their meanness by asking for a "temporary assistant" for a few weeks and offering remuneration at the rate usual for an ordinary assistant. Their motives are obvious, and one can only wonder whether there are qualified men foolish enough to take these places when at this time of the year there is plenty of work to be had at the proper rate. Can one be surprised that so many locum-tenents turn out unsatisfactorily, the principal finding on his return home that the practice has been neglected and damaged? No reliable and self-respecting man will go out under the proper rate, and a man who does go for less is usually one who cannot get respectable employment for some such reason as drunkenness. A man who is paid an inferior salary will always do inferior work, as is natural and to be expected. A friend of mine complained to me recently of the harm done to his practice by a locum-tenent engaged by him who was almost the whole time in a state of intoxication. My only reply was, "What did you pay him?" "Two guineas a week," was the reply. I told him that he had only himself to thank for getting the worst of the bargain and that I did not sympathise with him in the least. Hoping that other readers will give their opinions on this question,

I am, Sirs, yours faithfully,

Aug. 11th, 1896. LOCUM TENENS.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Hospital Vacancies in Newcastle owing to the Death of Mr. W. G. Black.

BY the sudden and unexpected death of Mr. W. G. Black vacancies occur at the Children's Hospital for a surgeon and at the Royal Infirmary, Newcastle, for an assistant surgeon, and for these posts there are already several applicants in the field. For the latter Mr. Vickery, F.R.C.S. Eng., a Middlesex Hospital man, at present holding the post of surgical registrar; Mr. Richardson, F.R.C.S. Eng., a Newcastle student, and formerly surgical registrar at the infirmary; Mr. Ouston, F.R.C.S. Eng., a Leeds student lately settled in the town; and Mr. H. B. Angus, M.B., B.S. Durh., a Newcastle student at present holding the office of resident medical officer at the Newcastle Dispensary, are in the field, and the contest is likely to be a keen one. At the Children's Hospital Mr. Vickery, who is at present doing the late Mr. Black's work and has been for some time his assistant surgeon, and Mr. Martin, M.B., B.S. Durh., the other assistant surgeon, are both applicants for the post of surgeon, and here also the contest is likely to be keen.

Extension of the Newcastle Dispensary.

Two branches of this most valuable charity have just been declared opened by the mayor, one in the western and the other in the eastern quarter of the town. Last year the dispensary relieved 27,000 patients, and its usefulness will be

materially increased by the present much-needed extension. It is one of the best managed institutions in the city and is liberally supported by the voluntary contributions of the working population, than which no better sign of its worth could be evidenced.

Proposed Exhibition in Aid of the Newcastle Infirmary Building Fund.

A difficulty has been raised in the city council to the lending of the recreation ground to the company endeavouring to organise an exhibition next year for the benefit of the Royal Infirmary building fund. In 1887 no objection was raised to the same piece of land being used in a precisely similar way for an exhibition, the surplus from which—a good round sum—was all given to the College of Physical Science. It is alleged that the public might object, and that then the council could not legally close the recreation ground. The Newcastle Infirmary does an enormous amount of work, it is overcrowded, and ought to be rebuilt. The corporation is the owner of all the possible sites on which a new infirmary can be erected, and hitherto the committee of the charity has been unable to obtain from the corporation any assistance whatever. Sooner or later the position of the infirmary must become a town question. It is discreditable to the town that so little public interest should be taken in the housing of the sick and lame poor. Two things are required—a new site, or an extension of the present one, and funds to build a new building. There seems to be little inclination in the city council to assist in either direction.

The Late Rev. H. T. Ormerod.

The Rev. H. T. Ormerod, Curate of St. Michael's, Byker, who was studying medicine at the University of Durham with a view of becoming a medical missionary, was drowned while bathing a few days ago at Runswick Bay. The body was recovered and on Monday last was buried at Carlisle, of which town he was a resident, a large concourse of relatives and friends attending the sad rite. The deceased clergyman was twenty-nine years of age and was held in great respect by his parishioners.

Memorial to Mr. M. F. Kelly of the Felling.

A sum of money has been collected by the friends of the late Mr. M. F. Kelly of the Felling, Gateshead, for the purpose of raising a memorial. Mr. Kelly for many years conducted a large practice in a densely populated district near Gateshead, and was much beloved by his patients. He died a few weeks ago after a short illness from an abscess of the brain the result of middle ear disease, from which he suffered for some years.

Sudden Death of the Home Secretary's Daughter.

Miss Cecilia Marjorie Ridley died on Sunday last at Blagdon, Northumberland, after an illness of only a few hours' duration from the rupture of a bloodvessel in the brain. She was only nineteen years of age. The deepest sympathy is felt by all classes with Sir M. White Ridley and Lady Ridley in their terrible bereavement. The deceased young lady was much beloved by a large circle of friends and acquaintances.

Newcastle-upon-Tyne, Aug. 19th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Medical Guild.

THE quarterly meeting of the Medical Guild was held in the Victoria Hotel on Tuesday, July 21st, Dr. J. Dixon Mann, vice-chairman, being in the chair. The following resolutions were passed:—

Medical Aid Associations, Club, and Allied Practices.—"(1) That this meeting strongly deprecates any member of the profession being connected with any medical aid association or system of sickness assurance where canvassing or advertising is practised or a profit made out of the services of the medical officers. (2) That the Council take steps to construct a committee representing the various medical societies of Manchester and Salford, such committee to inquire into and deal with the question of club and allied practices in all their branches."

Jewsbury and Brown's "Directory of Consulting Physicians and Surgeons," &c.—"That in the opinion of this meeting the tacit recognition by the profession of the publication of such a list as that issued to the public by Messrs. Jewsbury and Brown is inadvisable, inasmuch as it is calculated to tend towards a relaxation of the ethical rules regarding advertising; and the honorary secretary is instructed to communicate this opinion to the gentlemen whose names are so published in the belief that they will express (to Messrs. Jewsbury and Brown) disapproval of the inclusion of their names in such a list."

The Guild concluded their meeting by placing on record its appreciation of the firm stand taken by the lately resigned medical officers of the Lincoln Clubs and asking their acceptance of one guinea towards expenses.

Aug. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Curious Poisoning Case.

AT a sitting of the High Court of Justiciary held at Inverness on the 11th inst. Ellen Beaton, who acted as housekeeper at a farmhouse, was charged with using arsenic or other poison with intent to murder her master, Mr. Thomas Hay, and a number of other people who were dining with him. It appeared that the woman had declined to prepare dinner when ordered to do so and Mr. Hay had secured the services of a neighbour. To this the prisoner objected, and though put out of the house came back after a time and took some part in the preparation of the food. When the broth was served it was observed to have a bitter taste, and after partaking of it the guests one by one were compelled to leave the table, being seized with vomiting. Medical assistance was procured and ultimately the occurrence was reported to the police. At the trial prisoner was found to have taken part in the preparation of the broth, which by chemical analysis was shown to contain arsenic. The jury, by a majority, found prisoner guilty of administering poison with intent to annoy, but not guilty of any murderous intent, and she was sentenced to fifteen calendar months' hard labour.

Glasgow Companies, Volunteer Medical Staff Corps.

The position which these companies have attained is a most satisfactory one. The establishment of the companies followed a movement which originated with the medical students of the University for systematic ambulance training, and when the companies were formally recognised by the Government it was arranged that A Company should be confined purely to medical students and that B Company should be open to laymen. This arrangement has promoted a useful and healthy rivalry, which finds expression in the keen annual inter-company competition for a challenge cup presented by the commanding officer, Surgeon-Captain Beatson. The energy and spirit with which the movement has been carried on are indicated by the fact that each company is at present up to its full strength; indeed, there are candidates waiting for admission. The annual inspection is now recognised as one of the events of the volunteer year and draws large crowds to witness it, the ambulance drill and bearer company practice being very attractive and popular. At the beginning of the present month a detachment of the companies spent a week at Netley, the members taking the routine duties in the hospital wards and in connexion with the dispensary, stores, kitchens, &c. The work was interspersed with some recreation and enjoyment, one day being devoted to a cruise round the fleet off Portsmouth, returning by Cowes. The experience at Netley proved most valuable and enjoyable, and much credit attaches to the men and to Surgeon-Captain Somerville, who was in charge. The success of the companies on this occasion is paralleled by all their other undertakings—camps, competitions, concerts, sports, and athletics. Much of this success is to be credited to the commanding officer and to the company officers, Surgeon-Captain Somerville and Surgeon-Captain McGregor Robertson. But it is only fair to say that the companies have been exceptionally fortunate in their instructors, Staff-Sergeants Cameron and Kenney.

Glasgow Royal Infirmary.

The directors have appointed Dr. Balfour Marshall to be physician for out-patients in the department of diseases of women.

Aug. 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Apothecaries' Hall of Ireland.

AT the annual meeting of the Governors and Council of the Apothecaries' Hall of Ireland (Dublin), convened according to the statute of incorporation on Aug. 1st,

the following members were duly balloted for and elected to hold office for the year ending July 31st, 1897: Governor, Sir R. Jackson, C.B., F.R.C.S.I.; Deputy Governor, J. Raverty, L.R.C.S. Edin.; Directors, H. A. Auchinleck, L.R.C.P. & S. Edin., F.R.C.S.I.; W. V. Furlong, L.R.C.S.I., L.R.C.P. Edin.; John Evans, L.R.C.S.I.; Robert Montgomery, M.R.C.S. Eng.; Robert J. Montgomery, M.B. T.C.D., F.R.C.S.I.; Chas. Moore, M.D. Glasg., F.R.C.S.I.; L. Lucas, L.R.C.S.I.; R. G. O'Flaherty, M.B. T.C.D., L.R.C.S.I.; Sir G. Owens, M.D. Glasg., J.P.; C. R. C. Tichborne, L.R.C.S.I., F.C.S.; G. A. Stritch, L.F.P.S. Glas.; J. Shaw, L.R.C.S.I.; S. M. Thompson, L.R.C.S.I., L.R.C.P.I.; Representative on the Medical Council, C. R. C. Tichborne, L.R.C.S.I.; Consulting chemist, C. R. C. Tichborne; Secretary, R. Montgomery, M.R.C.S. Eng. The court adjourned till the first Friday in September.

The Richmond District Lunatic Asylum.

At the meeting of the governors of the Richmond Asylum, which took place on the 12th inst., it was stated that there were now on the asylum books no less than 1715 patients, the recognised legitimate limit of accommodation being thus exceeded by 613. It was said, however, that the new auxiliary asylum at Portrane would be commenced in about a fortnight, the Board of Control having just accepted the tender of Messrs. Collen of Portadown for the erection of the buildings at a cost of £167,000, the works to be finished in six years. It is certainly time that some active steps should be taken to prevent the recurrence of such another outbreak of beri-beri as took place last year. It was, indeed, the sudden appearance of that Eastern epidemic, the outcome of overcrowding and dirt, that roused the authorities at last to recognise the very objectionable state of things which existed at the Richmond Lunatic Asylum.

Honour to an Irish Medical Man.

Dr. C. C. de Burgh Daly, who had charge of the hospital for the wounded at Newchwang during the late Japanese war, has recently been presented by General Chang with an illuminated address and with the Order of the Double Dragon, a very high distinction, conferring on him the rank of Mandarin.

Report of the President of Queen's College, Belfast.

The report of the President (Rev. Dr. Hamilton) of Queen's College, Belfast, for 1895-96 has just been issued. The number of students in attendance during the year was 392, being an increase of six on the previous year, and of these 228 attended the faculty of medicine. The large majority of the students came from Belfast and the various districts of Ulster, and all the religious denominations were represented, the College being open to all classes without any distinction whatever of religion or sex, there being seventeen women in attendance. The discipline of the College was most excellent and not a single student was brought before the Council for any offence. During the year Dr. J. Seaton Reid, a former professor, and Dr. John Strahan, a very distinguished alumnus, died. Two additional lectureships have been founded, one in ophthalmology and otology, to which Dr. W. A. McKeown was appointed, and the other in sanitary science. The latter has been placed in the joint charge of Professor Letts, who will lecture on the chemical aspects, and Dr. Henry Whitaker, superintendent medical officer of health of the city of Belfast, who will deal with the Practical Details of Sanitary Science. A class of bacteriology, under Dr. Lorrain Smith, has also been commenced. Reference is made to the numerous honours and successes gained during the year by old sudents. The College charter has been altered in certain particulars, and among others new scholarships have been created in the medical faculty to meet the extension of the course for the degrees of M.B., B.Ch., B.A.O., from four years (its former length) to five, as now required by the General Medical Council. There are now ten medical scholarships. These new changes will come into operation next session, which in the medical faculty will begin on Oct. 20th, an earlier date than formerly. The pathological and physiological laboratories are finished and are now being utilised by the students. The College union will be ready for occupation some time next session, but three much-needed additions are urgently required—namely, a physical laboratory, a biological laboratory, and a chemical lecture theatre. The President urges on the Government the completing of these buildings, and more funds are wanted for the support of the various scientific departments. The jubilee of the College will be celebrated early in the coming year. There are now 54,000 volumes in the College library, which is the largest in Belfast, and the valuable collection of Greek and Roman coins has been catalogued by Dr. David Buick. All the museums and laboratories have been well maintained during the year, and the Sorella Trustees, established under the will of the late Mr. William Dunville, have made a grant of £100 towards the purchase of additional apparatus for the department of physiology. The President's report certainly indicates that the College continues to serve earnestly and successfully the great purpose for which it was founded, as defined in the charter, "to afford to all classes and denominations, without any distinction of religious creed whatever, an opportunity of pursuing a regular and liberal course of education." In an appendix to the report are given lists of the visitors, the professors, the deans of residences, and other College officials, and tables showing the number of matriculated students, their religion, where they come from, the number attending each faculty, the number of students attending each professor, with the number of lectures given, the names of the College scholars, benefactors of the College, &c.

The Derry Asylum Question.

At the weekly meeting of the Limavady board of guardians, held on Aug. 17th, resolutions were passed to the effect that the proposal to erect a new asylum is not justified by the limited number at present demanding relief in the existing buildings, and that the Derry Asylum governors be urged to secure Foyle College and grounds (of about nine acres) as a most suitable and convenient annexe to the present asylum, and in this way to provide for future extensions if required, and that Limavady Workhouse, having been built to accommodate some 750 inmates and being occupied by only 95 inmates at present, could be fitted either as a temporary or permanent asylum. On Monday, Aug. 13th, it was proposed at a meeting of the governors of the Derry Asylum by the chairman, Sir Hervey Bruce, Bart., that they endeavour to procure Foyle College and grounds for enlarging the present asylum instead of erecting a large asylum at great cost at Gransha. This motion having been seconded, Dr. Byrne, another governor, pointed out that there were resolutions on their books binding them to have the asylum removed to another site, and on a vote being taken the majority adopted this view. Notice of motion was then given by another governor, who will move at the next meeting that the resolutions relative to the new asylum (referred to by Dr. Byrne) be rescinded. The whole question is in a very unsatisfactory state. A new asylum is unquestionably needed, but owing to the agricultural distress cesspayers object to more taxation and contend that the half empty workhouses should be utilised.

Presentation.

Mr. Kendal Franks of Dublin has been presented by the visiting staff of the Adelaide Hospital, on the occasion of his leaving Dublin, with a handsome gold cigarette-box appropriately inscribed.

Aug. 18th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Pasteur Treatment of Hydrophobia.

WHEN this method of dealing with hydrophobia was still new it encountered the most searching criticism in the Italian schools, Rome taking the lead with a special congress of her most experienced practitioners. At that meeting, as reported in THE LANCET, a prevailingly sceptical note was struck, and by more than one speaker it was shown that a mad dog may by its first bite convey the poison to its victim; but that the second, third, or fourth bites decrease progressively in virulence, so as hardly to induce even the semblance of the disease. But it was these second, third, or fourth cases (argued the speakers) in which M. Pasteur's success was most conspicuous, while they still awaited a properly authenticated instance of recovery in a *bonâ-fide* first case. This scepticism, as THE LANCET from time to time has put *en évidence*, has been overcome in Italy, mainly through the practice of the Istituto Antirabico of Milan, an institution rigidly conducted on the lines of the Pasteur Institute in Paris, and only in very

exceptional cases introducing any modification on the parent-method. The Istituto has been seven years in existence, and its last report, that of the third biennium (1894-95) since its foundation, bears continued testimony to the excellence of its administration and the efficacy of its "cure." The statistics of these reports are compiled from data collected from the practitioners of the communes to which the hydrophobic subjects belong, from the syndics of the same communes, or from information received directly from the official *personnel* of the Istituto itself. The patients under treatment are classified under four heads: (1) those bitten by animals suffering from rabies which was confirmed with absolute certainty checked by laboratory experiment or by animals which had bitten other individuals who subsequently had succumbed to the disease; (2) those bitten by animals certified by a physician or veterinary surgeon to be suffering from rabies; (3) those in whom the bite was of doubtful virulence; and (4) those who had been bitten but were sent back without treatment on the ground of want of evidence of the animal being rabid or because the lesions sustained were such as to contra-indicate medical interference. In the first category the cases subjected to the treatment were 103, in the second 81, in the third and fourth the numbers were very much fewer, while the total under the four headings amounted for the biennium to 204. Out of that total two only are registered as "insuccessi" (unsuccessful), and of these the report gives a minute and most instructive account. The first was a child five years old, who, on March 22nd, 1894, had been bitten by a stray dog which fixed its teeth in the child's right cheek, producing extensive and deep laceration. Twelve hours after the lesion had been inflicted it was cauterised with the white-hot iron and thereafter the little patient was sent by the commune to the Milanese Istituto. The case was recognised as one of hydrophobia after inoculations practised on rabbits, and the Pasteur method was begun twenty-four hours after the bite. No untoward incident occurred during the treatment, which proceeded regularly through all its stages till May 15th, when the patient died under every accompaniment of "rabies furiosa"—fifty-four days after the bite and thirty-four days after the treatment had closed. The second failure was similarly that of a little boy seven years old, who had been bitten by a stray dog on April 5th, 1895. The animal, without previous provocation, had fixed its teeth in various parts of the face (forehead, nose, and right cheek). The bites were many, all of them deep, but no cauterisation was practised. The treatment at the Istituto commenced two days after the lesion and was followed regularly for twenty days, that is, to April 29th. In its progress nothing untoward happened, no indication of disturbance of any kind, but two days after the cessation of the treatment hydrophobia of the most violent description set in, and the child died in agonising convulsions on May 3rd, 1895. In both these cases, particularly the latter, the report draws attention to the extreme gravity of the bites as coincident with delay in subjecting the patients to treatment. Thus far the report. A word or two in supplement to THE LANCET'S previous notices of the Istituto may appropriately follow. The treatment, as applied in the Istituto, is strictly adapted to the seat of the bites and the character of the lesions. The invariable rule is to make the injections subcutaneously. During treatment the patients are vigilantly kept to a hygienic mode of life, stimulants being absolutely forbidden, and work of a not too exacting kind is allowed if the injections are followed by no serious reaction. The Istituto is directed and administered by a well-chosen committee of experts in each department, under the presidency of Dr. Levis, while the *direzione tecnica* devolves on Dr. Remo Segré, with another physician as assessor and with a special *personnel* for the surveillance of the animals experimented on and the *locales* in which they are accommodated. Inoculations are practised on the "morsicati" (the "bitten") once a day in the forenoon—at 8 A.M. in summer and at 9 A.M. in winter. The financial condition of the Istituto is, for Italy, exceptionally good, but the demands on its resources are proportioned to its steady success, and the report accordingly appeals to the philanthropic in city and province for a yet further largess in the interests of humanity and of the science which subserves it.

Thoracopagus.

This term (derived from θῶραξ, the trunk, and πάγος, that which is fixed or firmly set) is used by teratologists to indicate that form of monstrosity of which the Siamese Twins were the most noted example. Another phenomenon of the kind saw the light on the 11th inst. at Boara Pisani, in the province of Rovigo in the Venetian territory. A woman of the village, Trevisan by name, gave birth to female twins, fully and normally developed in all respects. They were joined together at the thorax, having two heads, four arms, and four legs. One of the two was born alive, but it survived only a few minutes. The monstrosity is now preserved in the Rovigo Museum.

Aug. 15th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Medical Ethics.

AFTER a long and animated discussion the Medical Chamber has at last adopted the following recommendations as to the mutual relations of physicians, patients, and the public. The first article, referring to the intercourse of physicians between themselves, declares that the maintenance of the honour and dignity of his profession is the medical man's first duty. Misunderstandings as a rule arise from the fact that patients seek further advice without previously informing the practitioner already engaged. If a medical man knows that a patient who consults him is already under the care of another practitioner he ought to decline further attendance, and ought not to express an opinion as to the diagnosis or treatment of such a case unless he has conferred with his colleague who has first been called; he should not refuse a consultation on the ground of the alleged inferior position or attainments of the proposed consultant. If two physicians do not agree a third is to be called. Fees ought to be claimed at the time; gratuitous treatment is only admissible in the case of poor patients. A medical man is not obliged to attend a patient, but he ought not to withhold assistance in urgent cases. Reticence as to patients' confidences is already prescribed by law. The third article refers to medical advertising, a subject which was discussed at length in THE LANCET of Sept. 14th, 1895, p. 680.

A Medical Man charged with Malpraxis.

An action which was brought against a medical man last week is of special interest to the profession on account of the conflict of opinion thereon existing among competent authorities. A woman whom the defendant attempted to deliver by means of forceps sustained a laceration of the left vaginal fornix and was admitted to hospital, where she died. The judge said that the woman died from purulent peritonitis, delivery having been performed in the hospital by Cæsarean section and extirpation of the uterus being necessary because of extravasation of blood in the peritoneum on the left side of the womb and the surrounding parts. This operation was performed in a proper manner and under antiseptic precautions. Post-mortem examination showed that the extravasation extended to the whole left side of the cervix and thence behind the peritoneum between the mesenteric laminæ of the descending colon to the spleen, and that it was due to a laceration of the left vaginal fornix which was without doubt produced by the attempts at extraction with forceps. It may be explained from the fact that the forceps was applied in a high presentation of the head and before the os was fully dilated, for in the hospital the external os was found to admit four fingers only and the head was fixed at the pelvic brim. The application of forceps in this case was contrary to the accepted rules of obstetrics, as the pelvis was narrow and there was an abnormal presentation of the head, the size and unyielding nature of which obviously rendered delivery by forceps impossible. In consequence of the above condition and of the inefficiency of the labour pains delivery was very difficult and medical interference was necessary, but not of the kind employed by the defendant. The perforation of the vaginal fornix and the infiltration of the cellular tissue with blood, though a grave injury, did not cause death; the fatal result was rather due to septic infection, which without doubt had already taken place before admission to hospital, for the fœtus was found to be decomposed before the operation. According to the defendant the woman was feverish before the application of the forceps; and it was possible that the septic infection had preceded the injury. Professor Schanta, in giving his opinion, said that the woman was in her second confinement and the labour was abnormal because of the size of the head and the frontal presentation;

it lasted twenty-four hours. The woman had symptoms of fever, the cardiac sounds of the child were not audible, and the delivery had to be completed. As to the question whether forceps ought to have been applied in this case Professor Schanta said that he would not have acted otherwise than the defendant did. The use of instruments in high presentation of the head is a grave operation; it is not impossible that though the practitioner may have applied them correctly the blades may have slipped in consequence of a movement of the woman and thus perforated the fornix. Considering that the defendant did not perform the operation in a hospital where he could have had the advantage of a great many assistants Professor Schanta regarded the case as a misadventure rather than a culpable proceeding. The medical man was accordingly acquitted and the judge stated that his professional ability was satisfactorily established.

Hæmorrhage during Pregnancy.

A pamphlet on the subject of hæmorrhage during pregnancy, just published by Dr. Heitzmann, contains many interesting and instructive passages. Hæmorrhages at the commencement of pregnancy are of great significance because they often show that abortion is imminent. The point of origin of the hæmorrhage has first to be ascertained, for it may arise from a pathological condition of the vulva, vagina, cervix, or the uterine cavity. Then the existence or non-existence of pregnancy is to be decided; if there be pregnancy, whether it is normal, as well as the relation between the hæmorrhage and the pregnancy. A definite conclusion is therefore of the greatest difficulty in cases where pregnancy cannot be diagnosed with certainty. In a young married woman whose menstruation has hitherto been regular the diagnosis of pregnancy may be easily made in the fifth or sixth week, but the case is quite otherwise in a multipara even after three months in consequence of irregular loss of blood. It, moreover, occurs not uncommonly during the first month of pregnancy that there is a so-called pseudomenstruation at the usual menstrual period; this takes place even in women who are still suckling their last child, and is due to hyperæmia and to the sub involution of the womb. Fresh, light red, and easily coagulating blood points to an injury, and in this case the existence of polypi and other growths may be inferred. It may also indicate low insertion of the placenta, but in this case is rarely met with before the third month of pregnancy. If the blood is cloudy and of changed consistence and mixed with fibrinous clots, it has evidently been extravasated for some time and retained within the womb; such blood is especially characteristic of hæmorrhage due to endometritis complicated with pregnancy; it is either serous or thick, brown or black, and contains mucus from the recesses of the cervical canal and the vagina. Besides examination of the blood a bimanual exploration of the uterus is to be made by which it will be found whether its size, form, and consistence are in accordance with the supposed duration of pregnancy, and especially whether it is extremely soft and sensitive. Endometritis with pregnancy—so-called endometritis decidualis—may also be diagnosed when the hæmorrhagic discharge is of long continuance and contains muco-pus; in this case the discharge may also sometimes be watery—the so-called hydrorrhœa of the pregnant womb. In this case the size of the uterus is in no proportion to the supposed duration of pregnancy. This condition disappears only in the second half of pregnancy, the decidua vera and reflexa being grown together. In this period there occur also hæmorrhages due to placenta prævia; they are spontaneous and the diagnosis can be made only after enlargement of the os externum and the cervical canal so that the finger may touch a part of the placenta. If the cervix and the inferior uterine segment are relaxed, and if there is a strong pulsation of the vaginal vessels, placenta prævia may be inferred even in the case of an entirely closed cervix. Hæmorrhages from the womb may also occur after an inflammation of the oviducts or after pelviperitoneal or parametral exudative processes, and in the case of retroversion of the pregnant womb, of ectopic pregnancy, after small-pox, enteric fever, syphilis, and blood diseases.

Aug. 16th.

MR. HORACE LAWTON SWETE, L.R.C.P. Lond., consulting surgeon to the Haverfordwest and Pembrokeshire Infirmary, has been placed upon the Commission of the Peace for the County of Pembroke.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Antisepsis and Asepsis in Surgery and Midwifery.

THIS important question has been the subject of an article by Dr. C. Bodon in the columns of the *Gyogyaszat*. After a short historical introduction he described the various effects of all antiseptic agents, whatever their mode of action, after which he gave a review of current literature and a summary of his own experience gathered during three years in British, French, and German hospitals. The arguments which, according to Dr. Bodon, might be brought forward in favour of antiseptics are: (1) the splendid results which have been obtained since they have been employed in surgery; (2) the fact that certain micro-organisms are recognised to be the causes of infectious diseases; and (3) the value of antiseptics even when given internally against such infectious diseases as malaria, polyarthritis, syphilis, &c. The arguments against antiseptics are summed up in the following points: (1) surgeons who do not apply antiseptics to the wound get at least as good results as those who work with "full antiseptic precautions"; (2) chemical antiseptics are apt to produce poisoning; (3) the action of a chemical compound in the laboratory does not enable us to infer its action in the human body; (4) it is a mistake to attribute every rise of temperature following an operation to infection; and (5) we do not know whether the good results obtained by antiseptic irrigation are due to the antiseptic action of the fluid or simply to the mechanical removal of the superficial dead matter. The writer holds that according to the present state of our knowledge "subjective antisepsis" should be employed, meaning thereby that hands, instruments, dressings, &c., are to be sterilised before an operation is performed, but that no antiseptic compounds should be applied to the wound itself.

Unguentum Hydrargyri cum Resorbino Paratum.

This preparation was first used against syphilis in Professor Neisser's clinic in 1893, and in that way came under the notice of Dr. Marschalko, who has since then employed it in all his cases of syphilis, and claims for it the advantage that it can be more readily rubbed into the skin than mercurial ointments prepared with suet, lard, or lanoline. It takes from twenty to twenty-five minutes to rub the latter through the skin, while the ointment prepared with resorbin will pass through it in five minutes. Further advantages of this ointment are that it never turns rancid and does not cause irritation of the skin.

Hungarian Dentists Act.

It has for a long time been a disputed question whether dentists who have obtained dental diplomas abroad should be permitted to practise in Hungary. Considering that only qualified medical men are allowed to practise dentistry in Hungary, and that there is no special examining board for dentistry in this country, the Government has declared that for the future a licence granted in another country will be valid only if its possessor is a qualified medical man who acquired his diploma of M.D. in one of those *universities* which are recognised in Hungary.

Aug. 17th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera Bulletins.

THE figures for the week ending Aug. 5th are reassuring. During the last nine days there have been 1271 new cases, distributed as follows: Alexandria, 1 to 8 cases daily; Cairo, none to 3 cases; the rest of Lower Egypt an average of 87 per day, Gharbieh being still the province chiefly affected; while in Upper Egypt there is a daily average of 47 new cases, including admissions to hospitals and deaths outside hospitals. To these figures must be added some amount of sickness in the Egyptian Army on the frontier the exact particulars of which are not yet forthcoming. It can easily be understood that the sad death of Surgeon-Captain Trask has not lightened the labours of the medical officers of the Egyptian Army, and they must be forgiven for not forwarding statistics regularly. The following is a summary of

the bulletin issued by the Sanitary Department on Aug. 5th:—

Town or province.	Existing.	New admissions.	Deaths.	Recovered.	Remaining.	Deaths outside hospital.
Alexandria	5	6	8	—	3	2
Cairo	23	1	1	—	23	2
Damietta	—	—	—	—	—	1
Suez	1	—	—	—	1	—
Ghizeh	—	—	—	—	—	—
Gharbieh	178	24	17	10	120	13
Behera	11	12	5	1	17	4
Charkieh	35	1	1	2	33	4
Dakahlieh	34	5	5	2	30	3
Galioubieh	12	1	—	4	9	6
Menoufieh	25	2	—	—	22	7
Beni Souef	—	—	—	—	—	—
Fayoum	12	—	—	3	9	4
Minieh	26	—	—	4	24	2
Assiout	22	7	9	3	17	7
Guerguen	20	—	—	—	20	—
Keneh	3	—	—	—	3	—
South of Keneh	53	—	—	9	43	1
Total	398	64	48	38	376	56

For the week ending Aug. 12th there is, I am glad to say, a general improvement to report in the Delta, but on the Upper Nile cholera is worse, chiefly at Assiout, Sohag, and Keneh. In Keneh town to-day's bulletin reports 73 deaths in private houses. During the last five days there have been 1024 new cases altogether in Egypt, the daily average being 84 for Lower Egypt and 120 for Upper Egypt. At Alexandria and Cairo from 1 to 4 new cases are reported daily, but the health of the army of occupation and of Europeans generally continues to be excellent. Cholera in Lower Egypt should now gradually die out.

Tannigen for Choleraic Diarrhœa.

About a year ago a new drug was described in Germany as being useful with or without salol for infantile diarrhœa. Tannigen is a compound of tannin and diacetyl, insoluble in water and acids but readily breaking up into its component parts in an alkaline medium such as the contents of the duodenum. It has been tried in a limited number of cases during the present epidemic and as an element of symptomatic treatment it would seem to have a possible future before it. I tried it in twenty-one cases of cholera, seven of which were decidedly bad upon admission to hospital, while the remaining fourteen were typical cases in danger of life. Ten cases recovered and eleven died, the dose given being sixty grains per day. Dr. Engel is collecting information from other observers with a view to future publication.

The March on Dongola.

One of the steamers from England is now on its way up the Nile, and it is believed that directly it reaches Kosheh, the present headquarters, an advance will be made so as to enter New Dongola (El Ordi) at the beginning of September. This steamer and four others which have been waiting at the frontier since the last Nile expedition will be chiefly used for transporting food up the river while the army marches along the banks, occasionally taking a short cut across the desert. The Nile fleet will be supplemented at once by three more new steamers from England, and will be under the orders of Commander Colville of the Royal Navy. These steamers, like all other stores, have rather a complicated journey before them. Starting from Alexandria to Beliana by train, they are conveyed by river from Beliana to Assouan, then by railway for seven miles round the first cataract, then by river from Philæ to Wady Halfa, and then again by the railway which has just been completed from Wady Halfa to Kosheh. Later it is expected that the railway will be continued across the desert to Said Fanti, not far from Dongola. Most people in England know that the country between Cairo and Assouan consists of a gradually narrowing strip of cultivated ground on both sides, but after Assouan until Dongola is reached there are only rocks and sand, excepting always the tiny tracts of cultivation next the riverain villages, which are all on the eastern bank. But on reaching Dongola the traveller to his surprise finds the town on the western bank, and stretching south from it for about twenty miles long and eight miles broad is the fertile province of which we have heard so much. The fertility must be dependent upon some geological formation which prevents the water from leaving its boundaries and the neighbouring sand from swallowing it up. But now it is time to think of the moral. Malaria and cultivation unfortunately go together, and therefore little has been heard of intermittent fevers during the expedition so far. This is what we should expect after the experience of 1884 when the English and Egyptian camps were healthy between Assouan and Dongola, but in September and October, 1884, there was a terrible amount of "fever" at Dongola. It is to be hoped this year that some precautions may be taken to prevent camps from being pitched too near the irrigated land, especially when the Nile is beginning to fall. The Egyptians are specially liable to intermittent fever because of their past malarial histories, but they are very immune from enteric fever. The English officers, on the contrary, ought by reason of greater precautions to be able to avoid malaria, but are liable to typhoid fever, especially if weakened by any malarial poisoning. In considering this danger one is comforted in remembering that all Dervish camps will be avoided with even greater care than usual, because cholera will be dreaded by the advancing force; and, again, it is quite possible that the irrigation canals have been allowed to silt up and the agricultural area under cultivation may be found to be comparatively small. In Dongola it is calculated that there are 6000 Dervish troops of all sorts without counting any very doubtful reinforcements which may now be on their way there from Khartoum. These troops, which the 10,000 Egyptians will now have to encounter, consist of Soudanese negroes and Baggàras, who will fight to the last gasp from pure love of fighting and not knowing when they are beaten. Then there are the Jaalin, who are very fairly brave and can fight if they want to, but will probably only do so if compelled by the Baggàras. After them are the Shagia, the tribe that was faithful to General Gordon; they also can fight, but they are known to be favourably disposed to the Egyptian Government. Lastly, there are the Dongolese themselves, who used to be employed as slave hunters by the Arab slave dealers, and many of whom are now in Cairo as grooms. They are known to be patiently waiting to be absorbed again by the Government, though they are not quite sure whether it is Egyptian, Turkish, or English. The last news from Murat wells is that there is a very ample supply of water in the impregnable fort guarded by a black company. These wells are half-way between Korosko and Abu Hamed across the desert, and the fort is warranted to protect the former place from the Dervishes.

Cairo, Aug. 12th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Diphtheria: a Collective Investigation.

THE serum treatment of diphtheria, one of the most prevalent of zymotics in this country, has been very widely practised in Russia in the last two years. Isolated groups of statistics have been published from time to time, showing a decided diminution of death-rate under this treatment as compared with the mortality under the older methods. With the aim of gaining still more light on this subject two medical societies in St. Petersburg—the Society of Specialists in Diseases of Children and the Society of Russian Practitioners in St. Petersburg—have formed a joint committee consisting of members of both these societies with instructions to collect all available statistics relating to the use of the serum in Russia. The committee contains the names of Dr. Raukhfus, director of the Prince of Oldenburg's Children's Hospital; Professor Lukianof, director of the Institute of Experimental Medicine (the chief source of the serum

employed in St. Petersburg); Professor Botkin, and six other medical men. A circular signed by these gentlemen, containing a blank form to be filled up, has been sent to all medical men and medical institutions in the country with a request to supply statistics of any personal experience the addressees may have had with the anti-diphtheritic serum, whether as a curative or a prophylactic. There are six headings in the form and blank tables for statistics of age of the patients, day of disease on which the treatment was commenced, and other like points of importance. If at all fully responded to this collective investigation should bring together a large mass of figures from which alone any reliable conclusion as to the value of the serum is possible. The forms are to be returned on or before April 1st, 1897, but it is requested that statistics relating to the year 1895 should be returned before Jan. 1st, and these statistics will probably be published separately and before the general report.

The Statue to Pirogof and the International Medical Congress.

Some discussion took place at the recent sixth Conference of Russian Practitioners in memory of Pirogof held at Kief as to whether the statue to the great Russian surgeon, now being erected in Moscow, should be unveiled on the occasion of the International Medical Congress or earlier. Some speakers expressed the opinion that the event was one of national rather than international significance, and that it should, therefore, take place before the Congress. The large majority, however, took the view that as Pirogof's fame had spread far beyond Russia, and his name was known all over the civilised world, it would be far more appropriate to unveil his statue during the International Congress, when representatives of all countries could take part in the ceremony. The amount collected to defray the cost of the statue amounts now to 13,000 roubles (about £1380), but from 1000 to 2000 roubles are still needed. There is no doubt that this comparatively trifling sum will soon be forthcoming.

Centenarians.

A letter in THE LANCET of July 25th, recording "An Authentic Case of Longevity," prompts me to send the following notes of parallel cases. Last year an old peasant named Ivan Kouzmin was reported to have travelled from Moscow to Kief at the age of 140. He was said to be in good health; he had formerly been coachman to Count Sheremétief, but in 1840 was sent to Siberia, where he spent fifty-four years, returning in 1894. His is not the only instance in which a Siberian exile has survived to extreme old age. Two years ago there was said to have died in Samara one Lavrentii Efimof, who had attained the age of 150. According to the newspaper report of him he took part as a boy in the famous Pugatchef rebellion in the reign of Catherine the Great, and for his share in that brief but sanguinary outbreak spent thirty years of his life in Siberia. Recently there was said to be living in the village of Vank (Saratof Government) an Armenian aged 110, the proud ancestor of ninety-one descendants, of whom seventy-one were still living. His name was David Kazarian. Another Armenian, a priest named Ter-Mikaeliantz, was reported not long ago to be living at Gori in the Caucasus at the age of 108; he was still able to walk to church, and once a year performed the liturgy. If recent history in the Turkish Empire continues to repeat itself, such instances of longevity among Armenians seem likely to become rare. Last December there died in the Government of Kharkof an old man, Theodore Liptzof, who was said to have reached the age of 115. He well remembered the Napoleonic invasion of 1812. It is worth noting that he drank *vodka* freely and that he took snuff and was an inveterate smoker of tobacco, which, *horribile dictu*, he not infrequently chewed as well. The Caucasus would seem to be a region favourable to length of days; in addition to the instance of the Armenian priest already quoted the following other instances have been reported from there. Last year, in the town with the unpronounceable name of Mtzkhet, a peasant with the appropriate but equally unpronounceable name of Adam Martolekishwili died at the reputed age of 130. Unfortunately some doubt must be thrown on the accuracy of this instance, for the newspaper (the *Kavkaz*) from which it is quoted adds that Adam left two sons, the eldest sixty and the youngest forty years of age. If this be true the youngest son must have been born to his father at the great age of 90—an almost incredible feat in non-patriarchal times. Adam is said to have left a widow aged 100; and this same town with the impossible name is stated still to shelter several old men and old women between ninety and 100. Three years ago one of its favoured inhabitants, a woman, died at the age of 120. Happy Mtzkhet. In Tiflis not long ago a woman named Urumsima Arutunova died at the supposed age of 120; and as recently as May last a brutal murder was brought to light in the district of Tiflis, in which the victim was said to be 109 years old. The object of this crime was not discovered. The case of Nicolas de Savin, the old French soldier who was taken prisoner by the Russians in 1812 and died two years ago in Saratof at the age of 126, was commented upon at that time in the English press. About the same time the case of another old soldier was brought forward, a Finn living in Wyborg, whose age was said to be 122. This summer there was said to be living a still older Cossack soldier; this man, named Solodof, residing in the village of Jovnino (Pottava government), is reported to have passed his 125th birthday. Finally, an old woman aged 117 is, it is stated, still living in Nikolaief. She is a Pole, and remembers well the taking of Warsaw by the Russians in 1793. In closing the list it is well to add that in many of the instances quoted a closer investigation might materially diminish the ages of the persons in question. Only last year a paragraph appeared in the papers relating to an old man who had come from Siberia and who had reached the age of 138. A later paragraph stated that on examining his passport his true age was found to be *only* ninety-nine.

St. Petersburg, Aug. 2nd (14th), 1896.

Obituary.

FRANCIS PARKER HOBLYN, M.R.C.S. ENG., L.S.A.

MR. HOBLYN died at his residence, Bladud-buildings, Bath, on August 10th. He received his medical education at Middlesex Hospital, and took the M.R.C.S. Eng. qualification in 1842, and three years later was admitted L.S.A. He had held the appointments of honorary surgeon to the Bath Penitentiary and senior surgeon to the Western Dispensary, Bath. Mr. Hoblyn was greatly respected in Bath and was one of the oldest medical practitioners in that city.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent medical men are announced:—Dr. Desgranges, Hon. Professor of Clinical Surgery in the Lyons Medical Faculty.—Dr. Cantalamessa, *privat-docent* in Medicine in Bologna.

THE DIFFUSION OF SMALL-POX.—The present history of small-pox in London is to the effect that the disease has for the time ceased to spread. There were only 5 cases removed to the hospital ships during the week ending Aug. 8th; no death from the malady was registered, and the number of patients remaining under treatment on the ships on Aug. 8th was only 22. No fatal case occurred in the above-mentioned week in any of the thirty-three great towns of the Registrar-General. Gloucester seems to have got rid of the disease and to be able to chronicle a clean sheet so far as small-pox is concerned after suffering 2000 attacks within a period of about ten months. The bitter lesson taught by this epidemic is not likely apparently to stem the tide of opposition to vaccination wherever anti-vaccinationists congregate. Proof of this has been seen quite recently in the parish of Islington, in the different attitude of the vestry, who, as a health body, are desirous of seeing the Vaccination Acts enforced, and of the so-called vaccination authority (to wit, the Poor-law guardians), who are wilfully ignoring the voice of the vestry; not only so, but the guardians also decline to hear what the public sanitary officers of the parish have to say on the health side of the question. The only consolation to be derived is to suppose that the reign of the Poor-law administrators (or shall we not say mal-administrators?) is probably short-lived now, and the sooner the bodies charged with safeguarding the public health have a voice in the matter the better will it be for all concerned.

THE BRITISH MEDICAL ASSOCIATION.

MEETING AT CARLISLE.

MEDICINE.

THURSDAY, JULY 30TH.

Discussion on Anæmia, its Varieties, Causation, and Treatment.

THIS discussion was opened by a paper by Dr. FREDERICK TAYLOR (London). After defining the term "anæmia" and discussing the relation of the red corpuscles, leucocytes, and plasma to this condition, Dr. Taylor said he would confine his attention to the so-called primary or idiopathic forms, which are two in number—chlorosis and pernicious anæmia—and detail the differences between chlorosis and pernicious anæmia. These differences are so great that the diseases present nothing in common except the presence of cardiac murmurs and the pallor of surface, though even here the skin in the one case is of a greenish and in the other of a lemon-yellow hue. Chlorosis is almost entirely confined to young females, while pernicious anæmia may attack either age or sex, but is specially prone to arise in middle-aged and elderly men. In the former the nutrition is not affected, constipation is frequent, and hæmorrhages rare; in the latter there is progressive wasting and not infrequently diarrhœa and hæmorrhages. The blood of the former shows very little diminution of red corpuscles, but a marked deficiency of hæmoglobin; while in the blood of the latter the red corpuscles may be reduced to 20 or 30 per cent. of the normal, but contain a greater proportion of hæmoglobin. Dr. Taylor then proceeded to discuss the causes of chlorosis and referred to the following theories of its production: disorders of menstruation, congenital narrowness of the aorta, disorders of the stomach (such as excessive acidity of the gastric secretions, low position, or proptosis of the stomach), gastric ulcer with hæmorrhage, disorders of the intestine (such as habitual constipation), and the onset of puberty aggravating certain conditions peculiar to the female sex. The great frequency of the disease in the female sex was, he considered, the overwhelming fact in its history, and each of the preceding theories had to be considered in relation to this point in the etiology of the disease. The admission that chlorosis might occur in males[1] and in females of middle age raised the question, What is the distinctive feature of chlorosis—whether a special condition of the blood, or a peculiar tint of the patient, or the mere apparent causelessness of a curable anæmia? Following out the relation of the female sex to the cause of chlorosis the influence of the corset was discussed in the production of ulceration and hæmorrhage, in the displacement of the stomach (gastroptosis), and generally in the production of pressure upon the upper part of the abdomen where blood-forming organs, such as the liver and spleen, as well as the stomach, are situated. The improvement which follows rest in bed rather supports theories of this kind. To explain chlorosis by aggravation at puberty of natural changes, of the nature of defects, is to charge nature with imperfect adaptation of means to ends; at the same time the inferiority in corpuscles of female blood as compared with male is of interest. The influence of iron in its treatment was also considered in relation to the amount of iron contained in food as a rule and in the food of chlorotics.

Dr. Taylor next spoke of pernicious anæmia, the "idiopathic anæmia" of Addison, in which disease opinions have varied from time to time as to whether its fatality, or any special condition of the blood, or the apparent absence of cause, is to be considered its essential feature. He thought that cases in which a definite lesion such as hæmorrhage was the starting point, and yet anæmia persisted long after the cause had ceased to exist, were as difficult of explanation as entirely spontaneous cases, and as much deserved the epithet "idiopathic." He then referred to the two opposing theories of Dr. Hunter and Dr. Stockman, the former maintaining that it is a special form of disease, due to destruction of the blood in the portal vein, probably as the result of ptomaines produced from micro-organisms in the bowel, in favour of which was the frequent accompaniment of intestinal dyspepsia. The latter argued that it may arise from any kind of hæmorrhage, the characteristic features being due to absorption from minute hæmorrhages in various parts of the body. There were difficulties in the way of accepting either theory as complete. Dr. Taylor then considered splenic anæmia, giving a brief summary of a case which had occurred under his care, and shortly described the characters of the disease, the anæmia of chlorotic type, the enlarged spleen, the absence of leucocytosis, the hæmorrhages and the progressive anæmia and emaciation, with death in from six months to four years. The nature of the disease was still very obscure. Banti had inclined to the view that it was a splenic form of Hodgkin's disease. It was important to recognise that it might be confounded with leukæmia unless the blood were microscopically examined. In the treatment of different forms of anæmia Dr. Taylor referred to the great value of prolonged rest in chlorosis and discussed the recent use of bone marrow or its extract in pernicious anæmia. It had not been uniformly successful. If the change in the bone marrow in pernicious anæmia was a return to an embryonic condition it was an effort to re-make blood in quantity, and the value of bone marrow supplied from outside was less apparent. The essential element in bone marrow was also not clear. The treatment of splenic anæmia by inhalation of oxygen, which had been used with varying effects in other forms of anæmia, and the value of the operation of splenectomy were also touched upon, the results of splenectomy in this disease contrasting very favourably with those obtained in leukæmia.

Dr. BYROM BRAMWELL (Edinburgh) remarked that he looked on hæmorrhages from the stomach as a secondary condition and not causal in any way. As regards the pathology of chlorosis, he thought it was due to something which prevented the absorption of iron in the intestines combined with the strain of puberty. As regards its treatment he advocated rest most strongly. The first principle he carried out was very large doses of iron, from nine to forty-eight Blaud's pills in the day, administered after correcting any derangement of the stomach, and then to keep the patient in bed for three or four weeks. This method of treatment he had found almost invariably successful in a few weeks' time. He thought that more than one condition was often included under the term pernicious anæmia, but those cases which corresponded to true pernicious anæmia were probably due to alterations in the bone marrow. He advocated treatment by arsenic for this condition, but it should be continued for a long time and also after recovery.

Dr. MICHELL CLARKE (Bristol) wished to refer to the action of syphilis as a cause of anæmia. He referred to two cases he had recently had under his care which presented symptoms exactly like pernicious anæmia. He had tried treatment by oxygen in pernicious anæmia and found that it increased the corpuscles and the hæmoglobin.

Professor W. T. GAIRDNER (Glasgow) as a clinical observer was satisfied there existed two opposite conditions of anæmia. He had not met with much success in what might be called the antiseptic methods of treatment of anæmia, though one case of anæmia improved under salol, the case however, afterwards turned out to be latent tuberculosis. Arsenic was the most satisfactory remedy in his experience for pernicious anæmia. The pathology of pernicious anæmia was very obscure. The question was this, Is it a fault in hæmogenesis or in hæmolysis? And the answer seemed as far off as ever. He referred to a valuable paper by the late Dr. Brackenridge, published in the *Edinburgh Medical Journal* some years ago, who met with remarkable success in the treatment of pernicious anæmia by repeated injections of small quantities of blood.

Dr. AFFLECK (Edinburgh) spoke in favour of rest as the best therapeutic agent in chlorosis, but thought smaller doses of iron than Dr. Bramwell had used were equally necessary. He believed that pernicious anæmia was a definite disease and was sometimes amenable to arsenic. He confirmed the efficacy of transfusion of small quantities of blood and mentioned a case in point.

Dr. A. HAIG (London) wished to limit his remarks to the causation of chlorosis by uric acid. Chlorosis and other forms of anæmia are constantly associated with excess of uric acid in the blood; he had found that by controlling the uric acid the chlorosis was also controlled; and, finally, remedies which cleared the blood of uric acid also did the chlorosis good. On an anti-uric-acid diet the chlorosis disappeared without any drug being administered. The

[1] Martin of Montreal has recorded four cases of chlorosis in males.

influences of age, diet, sex, climate, and various diseases on the occurrence of chlorosis were all explained on this view that chlorosis is the result of excess of uric acid in the blood.

Dr. BULKLEY (New York) thought that if in cases of anæmia the evacuations of the bowels were more investigated they would be able to treat the disease more successfully. He had obtained good results from the administration of antiseptic remedies by the mouth.

Dr. SAVILL (London) wished to emphasise the extreme liability to error in the diagnosis of all forms of anæmia and especially pernicious anæmia. He did not wish in the least to doubt the entity of Addison's pernicious anæmia, but he had seen so many cases which during life had been regarded as undoubted cases of pernicious anæmia and which had after death been shown to be cases of syphilis, latent carcinoma, and other conditions, that he had come to distrust many of the clinical observations unsupported by post-mortem examinations.

Dr. BEZLY THORNE (London) remarked that he had found three features to be common to all cases of anæmia and chlorosis: (1) excess of uric acid in the blood with more or less urinary inhibition; (2) a diminished vascular capacity; and (3) dilatation of the heart mainly, but not exclusively, of the right side. For treatment he recommended: (1) exhibition of ferruginous preparations with or without arsenic; (2) diet and gastro-intestinal antisepsis by means of salicylate of bismuth and minute doses of some mercurial preparations; and (3) the Schott methods of exercises and baths, which greatly promote the metabolism of the body generally.

Dr. JAMES TAYLOR (London) exhibited a series of lantern slides showing changes in the spinal cord associated with conditions of profound anæmia. These changes consist of a sclerosis, not only of the lateral and anterior columns, but also of the posterior columns. According to the incidence of this change so are found symptoms during life of lateral, anterior, or posterior sclerosis. In the latter case pupillary changes also occur. Dr. Taylor was inclined to think that these changes are not special to pernicious anæmia, but occurred in any condition of profound anæmia and debility. The changes in the cord are strongly suggestive of a toxic origin, affecting, as they do, the spinal cord in a symmetrical manner, possibly with small hæmorrhagic foci also. The spinal cord in pellagra showed similar changes to those he then exhibited in severe anæmia.

Dr. W. B. RANSOM (Nottingham) gave a lantern demonstration of the Histological Changes in Pernicious Anæmia based on eighteen cases, of which seven had previously had intestinal trouble. The deposit of pigment in many of the various tissues and organs of the body was well exhibited, though pigment was often absent from the liver and present in the kidney. The clinical and pathological features of the first five of these cases pointed to an increased destruction of blood in this disease and also the absorption of poisonous substances from the intestinal canal. These facts pointed to a destruction of the blood discs in the portal vein, though, on the other hand, it was curious that the pigment should in a few cases be absent from the liver. There was, Dr. Ransom thought, no evidence of special destruction of blood in the liver, spleen, and intestinal mucosa or in any one organ alone, but it seemed to have taken place all over the body. In his opinion this destruction was probably chiefly due to weakness of the young red cells newly and imperfectly formed in the long-bone marrow, and this disease, in his opinion, was probably in its essence a defective hæmogenesis consequent on frailness in the red blood cells. Furthermore, he came to the conclusion in his researches that pernicious anæmia was not one but several diseases.

The exhibition of Dr. Taylor and Dr. Ransom's specimens formed a pleasing interlude in the discussion, and the excellence of their lantern slides was warmly applauded by a large and appreciative audience.

Dr. WILLIAM RUSSELL (Edinburgh) regarded Dr. Taylor's cases as showing non-essential accompaniments of anæmia. With regard to Dr. Ransom's cases he would insist that anæmic cases in which other lesions were present must be excluded from the category of pernicious anæmia, and that that term must be confined to cases in which no cause for the progressive anæmia was discovered post mortem. No doubt there was a clinical difficulty, but it only confused issues to include cases where a cause for the anæmia was found. Even then it was possible that the cause might be varied. He (Dr. Russell) had long maintained that it was a disease of blood destruction, and he was glad to find Dr. Ransom's results tended to support this. The cause of the destruction was the point on which they were still ignorant; he was more and more disposed to regard it as probably due to a toxæmia, possibly by absorption from the intestinal tract; this view, to his mind, was becoming more forcible from the cyclical nature of some cases, their recoveries and relapses, with febrile manifestations. He had a case of that kind under observation at present, and he could in no way account for relapses nor could he altogether account for recovery.

Dr. R. T. WILLIAMSON (Manchester) and Dr. HANDFORD (Nottingham) also took part in the debate.

Dr. FREDERICK TAYLOR, in reply, said he was glad to find such a general agreement that pernicious anæmia was a specific disease probably due to increased blood destruction, though it might show several varieties due to the different causes of blood destruction. He agreed with Dr. Savill about the great care required in the diagnosis of anæmia, though he could not go quite so far as he did in excluding all clinical observations unconfirmed by necropsy. A great many latent conditions might exist without being evident during life, and he referred to the case recorded by Dr. Sidney Coupland and Mr. Pearce Gould in which the spleen was removed with great benefit for what was diagnosed as splenic anæmia; but subsequently the patient died from an intercurrent malady, and at the necropsy well-marked syphilitic disease of the liver of old standing was discovered.

Cirrhosis of the Liver cured by Operation.

Dr. DAVID DRUMMOND and Mr. J. R. MORISON (Newcastle-on-Tyne) communicated a case of Cirrhosis of the Liver cured by Operation. Based upon the fact that such cases recovered after several tappings, when the collateral circulation was established, an operation had been performed on a woman aged thirty-nine years with an alcoholic history and presenting severe ascites and œdema of the legs, due, as was verified at the operation, to hobnailed liver. After opening the abdomen and evacuating the fluid the visceral peritoneum covering the liver and the spleen was firmly scrubbed with a sponge, and the parietal peritoneum opposing these was also scrubbed so that adhesions could be produced. The patient made a good recovery and now, eight months after the operation, she was doing well and in good health. The patient was brought to the meeting and exhibited.

Dr. T. D. SAVILL (London) read a paper on the Pathology of Itching and its Treatment by large Doses of Calcium Chloride, which appeared in full in our issue of Aug. 1st.

FRIDAY, JULY 31ST.

Uses of the Roentgen Rays in Medical Diagnosis.

Dr. JOHN MACINTYRE (Glasgow) gave a demonstration of the results of his researches with "x" rays into the reproduction by photography of the more solid viscera such as the heart and lungs. The former of these has special interest at the present time in view of the differences of opinion expressed as to the accuracy of the results obtained by auscultatory percussion. Hitherto, Dr. Macintyre remarked, it had only been possible to photograph the bones and solid foreign bodies lodged in the tissues, but his researches had led him to conclude that they would, by a re-arrangement of apparatus, be able to display the soft tissues, and he showed some excellent pictures made by attending to the following points. 1. He found a very strong current necessary, sometimes as much as from thirty to thirty-three ampères being required, so as to take the photograph instantaneously. 2. The transformer requires a larger coil, giving a six, eight, or ten inch spark, which will take a very heavy current. 3. An ordinary small focus tube is all that is necessary, provided it has a proper vacuum. Dr. Macintyre had designed a tube in which, by tapping the glass, the anode could be made to approach, or recede from, the kathode. For many of the tubes prolonged heating is necessary, and many which had been discarded as useless may be thus rendered available. 4. Rapid exposures are absolutely necessary, and for this ample fluorescence and a high current are indispensable. A mercury interrupter is very useful to this end instead of a spring interrupter; and by this means in his experiments the current often registered seven ampères instead of one ampère. In this way the exposure necessary may be reduced four or five times, and in a simple photograph like that of the hand one flash was enough—i.e., one-fiftieth of a second. A large size of the

sensitised plate is of great value to show the relation of parts and greater perfection of detail; experiments on the neck were mentioned and shown in this regard. Large photographs measuring twenty-four inches by eighteen inches were shown, which also demonstrated the advantage of showing both sides of the body—to compare, for example, healthy and unhealthy hip-joints—together on the plate. As to the composition of the paint used on the screen he had found that barium platino-cyanide and potassium platino-cyanide gave the best results. To produce good definition it was of great importance that the tube should be placed at a considerable and very definite distance from the object. The further the object from the light the sharper are the shadows. It was possible to photograph some objects and omit others by arranging the object and the plate. Thus if it be wished to photograph the heart the sternum should be next the sensitised plate, because the viscera which are nearer to the sensitised plate come out most distinctly. In this way it is possible to photograph one side of the skull (the side furthest from the light) and to neglect the other side. He generally placed the light about three feet from the photographic plate, and for that distance a very strong light was necessary if, as was most essential, a very short exposure was desired. A large number of lantern slides were exhibited showing hypertrophy of the heart, changes in the lungs, and the various stages of Dr. Macintyre's investigation, which received the hearty appreciation of the meeting.

Discussion on Tuberculosis: its Prevention and Cure.

Dr. J. W. MOORE (Dublin), in opening the discussion, referred to certain facts concerning tuberculosis which may be accepted as proven—namely, (1) the essential unity of the various processes we call tuberculosis; (2) its bacillary origin; (3) the influence of heredity is still admitted, but this must now be regarded as a congenital vulnerability of the system; and (4) its transmission by infection may be regarded as settled, though the exact methods and paths of infection may still be open to discussion. Several instances of transmission of tuberculosis from patient to patient were mentioned, amongst others the case of a child who contracted tuberculosis of the hands from crawling on the floor. The numerous predisposing causes arrange themselves under two great headings, congenital and acquired; but tuberculosis is undoubtedly an infective disorder, and the introduction of the virus—the bacillus tuberculosis—is the one exciting cause of the disease. The great importance of recognising the early signs of phthisis was emphasised. The so-called "tuberculous red line" along the gums, the clubbed finger-tips, morning sickness, capricious appetite and distaste for fatty foods, and cogwheel respiration (respiration saccadée) are signs of very qualified value, for they may be due to many other causes. Myotatic irritability of the pectoral muscles, tenderness on pressure over the apex of the lung, lessened movements of the chest-wall, an abnormally clear percussion note, deficient vesicular breathing, relative or absolute increase in the intensity of the heart sounds over the affected apex, and accentuation of the pulmonic second sound are signs of much greater value. Referring to the enormous damage which tuberculosis inflicts both on the individual and the community Dr. Moore submitted a series of tables compiled from the returns of the Registrar-General for the fourteen years 1881-1894. These tables showed that the disease is more destructive to life in Ireland than in Scotland, and in Scotland than in England and Wales, the proportion of deaths from this cause to all causes being 14·9 per cent., 13·8 per cent., and 12·3 per cent. respectively. They showed also that there had been a remarkable decline in the death-rate during that time in England, Wales, and Scotland, but not in Ireland. The malign influence of town life was also demonstrated, the death-rate from tuberculosis in the city of Brussels being higher than all the zymotic diseases together. The paths through which tuberculous disease may be introduced are various—inoculation through the skin, the genital tract, the alimentary tract, and the air passages. Recent researches have shown that infection may originate from (1) the excretions or discharges of infected persons or animals; (2) the milk of infected animals or human beings, which has been shown to be a frequent source of abdominal phthisis in children; or (3) the flesh of infected animals. Three-fourths of the deaths due to tuberculosis are caused by the pulmonary form, the virus of which is undoubtedly derived from phthisical patients; and it follows that in order to control tuberculosis the bacillus-laden sputa and excreta which come from them must be destroyed, for the virus does not come off in the breath or in the emanations from the skin, but in the expectoration, which swarms with bacilli. This, though harmless while moist, is disseminated as soon as it dries as impalpable dust, which has been shown to infect the respired air and, settling on articles of food, to infect the alimentary canal when swallowed. If the dissemination of this poison could be stopped tuberculosis, like any other infective disorder, could be stamped out. A careful consideration of the foregoing facts suggests the following measures for the prevention and extermination of tuberculosis. (1) The hygiene of dwelling-houses, which should stand on a dry subsoil, freely exposed to fresh air and sunshine; (2) thorough inspection of the meat and milk-supply; and (3) complete and continuous destruction of the poisonous sputa by exposure of the bedclothes to sunshine, daylight, and open air, frequent cleansing of the room with a cloth damped with some disinfectant, through ventilation, and thorough disinfection of all articles by superheated steam. Those predisposed to tuberculosis should lead an active out-door life in a healthy, equable climate, such as a maritime health-resort, high, dry mountain air, dry sunny country, or moist warm climates, or take a sea voyage. Dr. Moore deprecated the hospital treatment of phthisis on the grounds of harm to the tuberculous patient himself from inefficient provision and insufficiency of pure air, and, on the other hand, the danger of infection to others. The dietetic and therapeutic treatment of the disease was referred to at length, mention being made of chloride of lime among the older remedies and salol and guaiacol carbonate among the new. The value of deep inspirations of pure fresh air was also mentioned; but he thought that medicinal without climatic treatment was of not much avail. The notification of every form of tuberculosis would be attended by some difficulty, and if limited to the pulmonary form only it would lead to very little practical result by reason of the chronic nature of the affection. But notification of deaths from phthisis would be desirable so that disinfection of the dwelling-place and the effects of the deceased could be carried out.

Dr. DE HAVILLAND HALL (London) cordially agreed with Dr. Moore in his objections to the hospital treatment of phthisis and believed the admission of such patients was useless, especially if in an advanced stage, because no good could be done to them and they only contaminated the hospital. He thought that the tonsils and nasal mucous membrane were often the home or hiding-place of tubercle bacilli, and advocated the removal of adenoid vegetations and attention to the tonsils in all persons who have an hereditary predisposition or who have been exposed to the contagion. Dr. Hall had come to the conclusion that there was no ideal climate for phthisis. South Africa was a very good climate, but the food arrangements were unsatisfactory. The following are, he believed, the conditions desirable—sunshine, uniform temperature (which need not be high in all cases), dry air, and absence of wind and dust. Meran in the Austrian Tyrol fulfilled many of the conditions necessary. He did not see any harm in cases of hæmoptysis going to high altitudes like Davos provided they approached the summit gradually, so that their lungs become gradually accustomed to the lower pressure. He wished to support the use of guaiacol and creosote carbonate, of which large doses might be given—10. 15, and 20 grains or more thrice daily in coffee—till the breath is redolent of the drug. Salicylate of bismuth, from 15 to 20 grains, was most useful for the diarrhœa, which was such a serious complication.

Dr. SHINGLETON SMITH (Bristol) would place the medicinal much before the climatic treatment, and thought that by its means the bacillus could be attacked in its stronghold. He wished specially to commend guaiacol, from 60 to 90 minims daily, and if the patients could not take it by mouth he had given it with equal benefit hypodermically. He thought the hopeless attitude assumed by some medical men was not justifiable; guaiacol and creosote could be given in very large doses, especially in the earlier stages, and much good could be accomplished by the means of 30 minims of guaiacol thrice daily. He had tried the "antiphthisin" of Klebs, and quoted his own experience and that of Carl von Brük of Connecticut, but the remedy was still on its trial.

Dr. GRIMSHAW (Dublin) feared that any attempt at notification of cases of phthisis, if it were possible, would damage the position of preventive medicine with the public; but he did not think the same objection would obtain in the notification of deaths from the disease.

Dr. AFFLECK (Edinburgh) wished to refer to the hospital

treatment of phthisis. Many cases he had seen had led him to regard the danger to other patients in hospital as very great. He referred to a patient suffering from sarcoma of the lungs who had slept next a patient with acute phthisis, in whose lungs nodules of recent tuberculosis were found after death. The ideal would be to have hospitals only for the treatment of initial stages and other hospitals for the treatment of advanced cases only.

Dr. R. W. PHILIP (Edinburgh) wished to emphasise the use of fresh air and plenty of fresh water for ablution. Why not let patients go out when it was raining and make them bathe every day and keep their windows open all night and every night? He had found that treatment based on these lines caused a disappearance of night-sweats and cough and that patients gained weight and did well. Immense good could be done by guaiacol, but it should be administered, not in a *dilettante* fashion, but until the system was quite saturated; and not only internally, but by inunction also. As to the hospital treatment, he thought three things should be provided for: (1) a hospital system in the heart of the town with an out-patient department; (2) a hospital for the in-patient treatment of early cases; and (3) a hospital for the reception of advanced cases.

Dr. FREW (Kilmarnock) advocated the west coast of Scotland as the best climate in his opinion for the treatment of phthisis. The subcutaneous injection of guaiacol had caused boils in his experience. Possibly the oil had not been sterilised; and after hearing the previous speakers he would certainly resort to it again.

Dr. BEZLY THORNE (London) thought that the efficacy of guaiacol and creosote internally might be explained by their intestinal antisepsis, but did not believe very much in these remedies given by mouth. Hypodermically he thought these drugs were of immense value, diminishing the expectoration and cough; and he mentioned cases in support of this statement. He adverted to the horrible fatality of the disease in this country, and said that if the early recognition and early treatment of the disease were provided for it would be an economy to the State, not only relieving our poor-houses of 30 or 40 per cent. of their inmates, but in this way saving an immense amount of suffering.

Dr. VAN SOMEREN (Australia) spoke of the advantage of Australian health resorts in the treatment of phthisis, and indicated certain districts specially adapted to the complaint.

Mr. ODELL (Torquay) thought that there already existed in this country, both in London and elsewhere, ample means for the treatment of phthisis, both in the earlier and later stages of the disease, for the poor and for the rich and also for the middle-class, without the necessity of appealing to the State, and he enumerated many institutions in support of the statement. He advocated the climate of Torquay and out-door treatment for cases of phthisis; even in the later stages. As regards Koch's treatment he thought it had been too soon abandoned. He had had thirteen cases under this treatment, and four of these were still living and in perfect health.

Mr. COLIN CAMPBELL (Saddleworth) spoke in favour of the direct introduction of guaiacol in glycerin solution into the lungs by means of a syringe with a tube long enough to reach below the lower vocal cords, after the manner he had advocated in the Transactions of the Royal Medical and Chirurgical Society two years ago.

Dr. BROOKHOUSE (Nottingham) stated that he was in the habit of using a 12 per cent. solution of menthol in olive oil, of which he injected one drachm into the lungs daily in the treatment of phthisis, and had found it extremely efficacious; hectic, cough, and expectoration disappeared under this treatment and the patients gained in weight. Others among his colleagues at Nottingham use guaiacol and creasote in the same manner and with good result, but he had got the best results from menthol.

Dr. MOORE, in reply, wished to draw the attention of the last two speakers to the fact that the bacilli were not lying loose in the lungs, but were embedded in the tissues. Nevertheless, the inhalations and injections were useful in checking the secondary products of tubercle, such as bronchitis and inflammation; but the microbes themselves were inaccessible to the injections into the lungs in the manner described.

At the conclusion of the discussion Dr. GRIMSHAW (Dublin) proposed, and Professor GAIRDNER (Glasgow) seconded the following resolution, which was carried unanimously:

"This Section is of opinion that the Council of the Association should take an early opportunity of impressing upon the Government and public authorities—having regard to the facts now fully established and recognised by the medical profession that tuberculosis is an infective disease and capable of being controlled by special measures that in order to produce any beneficial results on an appreciable scale it is necessary:

"1. That provision should be made at the public expense for bacteriological laboratories by all the sanitary authorities, where the sputum from patients expected to be tuberculous can be examined and reported upon.

"2. That on the discovery of pulmonary phthisis in any individual of the poorer classes, provision should be made for the treatment of such cases in a public institution provided for the purpose at the public expense and by voluntary contributions."

Thymus Feeding in Exophthalmic Goitre.

Mr. DAVID OWEN (Manchester) read a paper on Thymus Feeding in Exophthalmic Goitre. He described three cases of this disease under his care treated with thymus gland. The first had been described in the *British Medical Journal* of Feb. 15th, 1895. Since then Mikulitz, Cunningham, Edes, Solis-Cohen, Maude, and Todd had reported on the same treatment with confirmatory results. All three of his cases had been restored to health by the treatment. The dose of the raw gland was from half an ounce to an ounce three or four times a week. The relief obtained in these cases must have been more than a coincidence, as in one of his cases and in several recorded by others discontinuance of the gland was followed by relapse, but on resuming it the patients again improved. Upon one occasion a patient of his who always had been benefited by the treatment failed to respond to the glands. This was found to be due to their having been taken from full-grown sheep. On giving calf's thymus most urgent symptoms were at once relieved, especially dyspnœa, palpitation, and tremors. The heart, which had been irregular and rapid, improved greatly in a few days. Others had had quite as striking results. Mr. Owen observed that the thymus glands had been found hypertrophied in this disease by a number of observers, including Mœbius and Marie. Joffroy had remarked that this "revival" of the thymus gland was found almost exclusively in exophthalmic goitre. It was clear, therefore, that this gland played a part in the disease, and there were grounds for believing that its hypertrophy was compensatory, its internal secretion serving to neutralise the toxic agent which caused the disease. The probability of this is supported by the fact that other lymphoid structures, including the spleen, were also found enlarged, and it was well known that increased lymphoid activity with consequent leucocytosis occurred in toxæmic conditions and served an antitoxic purpose. It was therefore probable that the hypertrophy of the thymus gland and spleen was compensatory. Splenic extract had also been found beneficial in Graves's disease by Professor Wood of Philadelphia. Further confirmation of this theory was derived from the fact that pregnancy often relieved Graves's disease, and this might be due to the physiological leucocytosis which existed then. It was noteworthy that this disease is almost unknown in infancy when the thymus gland is present. The fact that the thyroid gland is more active during infancy than it is later would render the infant more liable to hyperthyroidisation were there not some counteracting influence which the thymus gland possibly supplied. He thought there was evidence of antagonism between the thyroid and thymus glands. Thyroid extract increased tissue waste. On the other hand, the thymus gland was most developed during infancy, and in hibernating animals at each period of hibernation, which pointed to this gland exerting an inhibitory influence over waste. This theory had been strengthened by the results of experiments and by the effects produced by disease of the thymus gland. The thyroidal secretion, too, had a stimulating influence over the cerebral functions, and increased activity of the sexual organs was associated with enlargement of the thyroid gland. On the contrary, during hybernation, when the thymus gland attains its greatest size, the cerebral and sexual functions are suspended and in infancy are undeveloped, but undergo rapid development at puberty, when the thymus gland finally disappears. This apparent antagonism supplies a hypothetical explanation of the mode of action of thymus in the treatment of exophthalmic goitre—a disease most probably due to excessive activity on the part of the thyroid gland.

Cerebro-spinal Fever in Scotland.

Dr. WILLIAM FREW (Kilmarnock) read a paper on the above subject. He had had his attention directed to this subject since 1834, when a slight epidemic outbreak of it occurred in the town of Galston, Ayrshire, where he was then practising. The diagnosis, although formed first of all from the clinical symptoms, was confirmed by several post-mortem examinations, specimens of the brain and spinal cord being forwarded to Professor Coats of Glasgow University for further confirmation (see report in *Glasgow Medical Journal* for July, 1834). Previously to this time the almost unanimous belief in the profession was that Scotland had enjoyed an immunity from it, and it is so stated even in Fagge's "System of Medicine," published in 1836. In 1838 Dr. Frew published a further series of cases, which had occurred partly in his own and partly in the practices of medical friends who had kindly communicated them to him.[2] In the meantime records of other cases had appeared in various journals and notably a series of thirty-four cases which had occurred in epidemic form in Dundee as early as 1877-78 under the observation of Dr. T. J. Maclagan.[3] Most of the other cases recorded were sporadic from various parts of Scotland, and in them the diagnosis had been confirmed either by post-mortem examination or the opinion of a well-known consultant. Since 1888 he had seen quite a number of cases occurring usually in the cold spring months. One singular and well-known sequela of the disease is complete loss of hearing, leading in young children to deaf-mutism. In the United States it has been reckoned to account for 20 per cent. of the deaf mutes,[4] and in some Continental countries the percentage has been almost as large. In two cases Dr. Frew had seen this result. From the foregoing data he has been led to form the opinion that Scotland does not, and probably did not prior to 1884, enjoy the immunity from this disease with which it has been credited. In conclusion he alluded to the difficulty of diagnosis in many cases, the diseases with which it is most likely to be confounded being tuberculous meningitis, typhus fever or typhoid fever (as in the Dundee cases, where they were all sent into hospital as such), and influenza. In the latter instance the similarity is very striking.

The Difference between Diabetic and Non-diabetic Blood.

Dr. R. T. WILLIAMSON (Manchester) described a simple clinical method of demonstrating the difference between diabetic and non-diabetic blood. He finds that diabetic blood is much more powerful than non-diabetic blood in removing the blue colour from a warm alkaline solution of methyl blue. The method is as follows. Into a small test-tube 40 cubic millimetres of water are placed; then the diabetic patient's finger is pricked and 20 cubic millimetres of blood taken up by the capillary tube of Gower's hæmoglobinometer and added to the water in the small test-tube. Afterwards 1 cubic centimetre of a 1 in 6000 watery solution of methyl blue is added, and finally 40 cubic millimetres of liquor potassæ. For comparison, into a second small test-tube are placed 20 cubic millimetres of non-diabetic blood with the same proportion of methyl blue and alkali. Both test-tubes are then placed in a capsule or vessel containing boiling water for about five minutes. The fluid in the tube containing the diabetic blood loses its blue colour and becomes pale yellow, whilst that in the tube containing the non-diabetic blood remains blue (occasionally it becomes slightly violet or greenish-blue, but the blue colour does not disappear). The blood of healthy persons and of 160 patients suffering from the most varied diseases was examined, but in the above proportions methyl blue was never decolourised, whilst in the examination of diabetic blood the blue solution was always decolourised. The diabetic patients were all suffering from a severe form of the disease. It is probable that in the mild cases of glycosuria the difference will not be detected, or will only be detected when the proportions of the fluids are altered.

Tropical Colonisation.

Dr. LUIGI SAMBON read a paper on Tropical Colonisation. He commenced by referring to the importance of the question and the wide difference of opinion which existed, though the prevailing idea was that tropical climates are decidedly injurious to Europeans, a statement with which he did not concur. The death-rate of the whole of Tropical Africa would probably compare unfavourably with England, but certain parts of it are more salubrious, and the mortality is largely due to unhygienic living rather than climate. Much of the injury erroneously attributed to climate is due to unhealthy water-supplies, which can be, and generally is in course of time, obviated by hygienic measures; and, again, much of the disease that affects Europeans is due to the lives they lead. It is found that the tea-planters of Bengal, for instance, who lead in-door lives, are sickly, while the indigo planters of Urhoot, who expose themselves at all seasons and take much exercise in the sun, retain their European appearance and health. As regards infantile mortality, the mortality of tropical climates is, for instance, in Calcutta 58 in 1000 born, but it must not be forgotten that in some mining districts in England 270 die out of 1000 born. This tends to show that it is not so much climate as the mode of living and the care taken of infants. Dr. Sambon proceeded to show that there is evident proof that it is not the climate which opposes colonisation in tropical lands so much as the foolish continuance of the unsuited habits and customs of European living, the errors of clothing and diet, and the neglect of all principles of hygiene. One of the most striking proofs of this was seen in the army experience in India, which shows that the mortality of the European soldier has declined by quite two-thirds within the last twenty years, since better customs and hygienic measures have been introduced.

Treatment of Epilepsy by Bromide of Strontium.

Professor ANTONY ROCHE (Dublin) read a paper on the above subject, giving the results of this treatment in twelve cases which had come under his care in his private practice since he last published a paper on the subject two years ago. The treatment adopted, besides meeting any general indications, obtaining the best hygienic surroundings possible, and advising a strictly vegetable diet with milk, was to give twenty grains of bromide of strontium with from five to ten grains of bromide of ammonium or sodium night and morning largely diluted with water. The strontium was rapidly increased to one drachm a day when it was found that the smaller doses did not control the attacks and where the patient did not complain of it. The majority of the patients took the strontium without the occurrence of any depression, but generally with the production of an acne rash on the face; liq. arsenicalis added to the mixture controlled the rash and increased the appetite. This course in all the cases materially lessened the number of the attacks, and in eight of the cases there had been so far no return of them—that is, after an interval of sixteen, twelve, eleven, nine, eight, eight and a half, five and a half, and four months respectively.

Dr. G. V. PEREZ (Teneriffe) read a paper describing a new physical sign which revealed the existence of Mediastinal Adhesions in cases of suspected aneurysm, chronic latent pericarditis, &c. It consists of a loud creaking sound heard on auscultation when the patient's arms are raised and the hands extended over the head.

PSYCHOLOGY.

FRIDAY, JULY 31ST.

The Use of Sedatives and Hypnotics in the Treatment of Insanity.

Dr. L. R. OSWALD (Glasgow) opened the discussion with a paper on the Use of Sedatives and Hypnotics in the Treatment of Insanity.[1]

The PRESIDENT said he had long been interested in the effects of these drugs and agreed with Dr. Oswald's remarks and held the same view as to the danger of these drugs. He considered that hypnotics tended to retard recovery and were not followed by good effects.

A MEMBER said he had only heard that part of the paper on sulphonal. He said there had been too much sentiment on the question of the use of sedatives. A term "chemical restraint" had been invented which tended to that result, and he was not certain on which side of the Border it had been invented. He thought patients should be treated individually and not by classes.

[2] See Glasgow Medical Journal, March, 1838.
[3] See Edinburgh Medical Journal, August to December, 1886.
[4] See paper by Dr. Bobby, read at the International Medical Congress in Washington.

[1] Vide THE LANCET, Aug. 8th, 1896, p. 430.

Dr. YELLOWLEES (Gartnavel) agreed with Dr. Oswald's views. An important point was the unfortunate necessity of the use of sedatives in the treatment of patients in private houses, as in cases treated before certification. Not having the necessary arrangements for the proper management of the case it was necessary to use sedatives to obtain proper control of the patient. Another point was that the attendant medical man, not being able to watch the effect of the drug, as could be done by the resident medical officer of an asylum, was obliged to give it in small and repeated doses. If a sedative had to be given it should be given in an effective dose and not in repeated small ones. He summed up his views as to the administration of sedatives in the words "the less the better."

Dr. MCDOWALL (Morpeth) said that in cases of melancholia he did not think the mental agony to the unfortunate patient of sleepless night was sufficiently considered, and in such cases he thought hypnotics should be used, otherwise he did not advise the large use of these drugs.

Dr. CARLYLE JOHNSTONE (Melrose) thought no hard-and-fast line should be drawn, but that each case should be considered on its merits, and when using a sedative they should ask themselves, What is the object in using it? Is the object being attained? Is it being attained at too great expense?

Professor GAIRDNER (Glasgow) said that, having no special knowledge on the subject of the paper, he was glad to listen to the views of so many of his old pupils. He had been much impressed in his early days by what he considered to be the unfortunate effects of the administration of large doses of alcohol and opium in cases of delirium tremens, and considered that in the use of some of the more modern hypnotics the effect desired was often obtained at the expense of serious, possibly lasting, injury to the blood.

Mr. FINEGAN (Mullingar) thought the small amount of knowledge they possessed as to the action of these drugs should make them cautious in their use.

Dr. URQUHART (Perth), being much interested in the subject of Dr. Oswald's paper, did not think there appeared to be much difference in results in those asylums where sedatives and hypnotics were freely used and in those where they were seldom employed. The tendency was often, he thought, to use them only in noisy cases.

The Modes of Provision for Chronic Pauper Insane.

Dr. TURNBULL (Cupar) read a paper on this subject. He said he had omitted the word "best" from the title of his paper. The question of providing for the chronic pauper insane had frequently been discussed at these meetings, and the constantly increasing number of cases on the official registers and the corresponding demand for more accommodation made the matter one of continued importance and interest. The modes of provision made might be classed under two heads:—(1) institutional care, comprising (*a*) asylums, and (*b*) wards for insane patients in workhouses or poorhouses; and (2) private care. It is certain that in every country a larger or smaller number of lunatic patients were under private care; but it was quite exceptional to have these cases brought under systematic supervision by the State. In England and Ireland the central boards of lunacy had to deal only with patients in institutions. The cases in private care did not come in any direct way under their cognisance; and thus there was no proper inspection and no guarantee that the provision made for the patients was of a satisfactory kind. In Scotland the patients in private care had for many years come systematically under the inspection and control of the Central Board of Lunacy, and there could be no doubt that as a consequence it had been possible to develop the system and to make it provide satisfactorily for a much larger proportion of the insane than in other countries. All patients in asylums in Scotland were also under the supervision of the Central or General Board of Lunacy; but the local or district boards of lunacy and the asylum officers under them had to do only with the patients in the asylums in their districts and had no responsibility for those in private care. The latter were looked after by the parochial authorities, who were in this matter supervised directly by the General Board of Lunacy. In Massachusetts the private or "family" care of lunatic patients had received increased attention in recent years and had been adopted to some extent. In Berlin a system of private care similar in various respects to the Scottish plan had been followed of late years with success as an addition to the already existing asylum accommodation. In it a proportion of the cases continued to be supervised by the asylum medical officers, whilst the remainder were handed over to those who deal with the relief of the ordinary poor and ceased to be under any expert inspection. In Gheel was a typical example of the employment to the largest possible extent of private care. The central asylum was small and could receive only a limited proportion of the patients and served rather to pass them on to the houses of the guardians in the village or commune, where they continued under the supervision of the medical officers of the asylum. In this country the lunacy legislation, already established, the density of the population, and other conditions made it clear that anything approaching the Gheel system could not be satisfactorily adopted. The great proportion of our insane cases would have to be cared for in institutions, but it was open to discussion if the system of private care had been utilised to the extent possible and desirable and if any change might be made with advantage in the character of the institutions provided. To these two points he would devote the rest of his remarks. Institutional care was requisite (1) when it gave a prospect of recovery not to be secured elsewhere, and (2) when it guarded against probable danger to the patient or the public or any offence to public decency or amenity. Many cases of insanity, when they had passed beyond the probability of recovery, might still be a source of danger or offence and require detention, but a considerable number were in a state in which they were harmless and inoffensive as long as they were under some slight supervision, and might even be able to do some amount of useful work. It was this class that was adapted for private care; the patients might never need to go to the asylum at all, or after a term of asylum treatment might become fit for discharge under suitable conditions. Such cases were found in the less severe forms of congenital defect, in moderate dementia, and in the mildly delusional forms of mental derangement, and their removal from institutions would to a corresponding extent relieve the pressure on the accommodation there. The statistics of the Berlin procedure showed that cases of general paralysis were sometimes provided for in this way, and it appeared that the plan was also followed to secure the removal from the asylum for a limited time of cases of remittent or periodic insanity. It would, he thought, be generally felt that in general paralysis the risk of accident was too great except during a comparatively short stage of the disease, and the patients were therefore better in the asylum unless under exceptional circumstances. In Scotland cases of recurrent insanity were not usually considered suitable for removal from asylum care, though naturally much must depend on the ascertained length of interval between, and the mode of incidence of, the attacks. The mistakes to be guarded against in the system of private care were (1) selecting unsuitable patients; (2) aggregation of too many patients in one district; and (3) inefficient guardianship; and these were best met by a thoroughly qualified system of central and local inspection and control. In regard to institutions it was submitted that the use of workhouses or poorhouses accommodation was not desirable, and that the cases at present provided for there could be quite suitably placed under private care, while the remainder would be as efficiently and as economically cared for in asylums. The present lunacy districts should, however, be subdivided when necessary to prevent the over-growth of asylums, it being desirable that no asylum should have more than 1000 patients.

The PRESIDENT pointed out that in England the number of inspectors—six—had never been increased since they were first appointed and they had to inspect some 90,000 patients. In Scotland there were two with 14,000 patients. He considered that the English Commissioners had done good and great work. Much had been said about the superiority of the Scotch law over the English, but it must be remembered that the English law had been in operation for ten years before the Scotch. He considered the asylum physician should have some supervision over the boarded-out cases.

Dr. URQUHART considered the asylum physician should be able to place the patients to be boarded out wherever he considered would be most suitable, and that the numbers of commissioners in England should be increased, and suggested that some representation to that affect by the British Medical Association would be of advantage.

Dr. J. CUMING (Belfast) thought the plan of sending chronic patients from asylums to the workhouses was not a good one. Patients after treatment in asylums with adequate medical and special treatment were sent to the union with

few medical officers and no special arrangements. That a case had become chronic appeared to him to be no reason for sending it to the union. In Ireland there was no system for boarding out pauper patients, but probably some system would be tried. He had visited well-to-do patients who were being cared for outside asylums. He spoke with great reserve, but was not satisfied it would be a good or economical plan for pauper patients in Ireland.

Dr. CARLYLE JOHNSTONE considered boarding-out systems for pauper patients good, but patients should continue to be within the view of the asylum physician.

Dr. TURNBULL, in reply, said that the essence of the boarding-out system was adequate inspection, but in England there were not enough inspectors to do the work. The plan of the medical officer of the asylum looking after boarded-out patients was good if he was assisted, but he thought the superintendence of homes could be better done by local medical men as they would be better able to discover how the houses were conducted and the patients cared for.

Insanity in Children.

Dr. IRELAND (Polton) read a paper on Insanity in Children. After considering the difference between the characteristics of insanity in children and adults and the growth of the brain, he discussed the influence of education on the mental manifestation of insanity in children, insanity in children *per se*, melancholia, suicide in children, and epileptic insanity, and illustrated his remarks with notes of numerous cases. He concluded by discussing the prognosis of insanity in children.

Dr. SHUTTLEWORTH (Richmond) said the subject of the paper was one of great importance and much overlooked by medical men who were not specialists. Cases of insanity were often sent to the asylums for the imbecile and had to be sent to the lunatic asylum.

Sir FREDERIC BATEMAN (Norwich) wished to call attention to Dr. Ireland's remark that the most common cause of insanity in children was neurosis. This lead him to point out that the insane child was too often the victim of parental defect or of parental vices, and he expressed the opinion that intemperance of the parent, although it showed no very particular bad result in the drunkard, often transmitted its effects to the offspring who was born with a neurosis, usually a degeneration of brain tissue.

ETHICS.

THURSDAY, JULY 30TH.

The Local Organisation of the Profession.

Dr. FREDERICK PEARSE (Southsea) read a very practical paper in which he urged strongly the necessity of combination. The business side of medical practice had been neglected, he said, and consequently the profession had been grossly imposed upon. He pointed out that it was absolutely necessary to have both a *central* as well as a *local* organisation. The central organisation would be called upon to lay down broad principles of action and the local organisation would formulate the details. It was not possible to adopt the same rules for every district; but it should be possible to get all the medical men in the various districts to agree together about clubs, medical associations, and other public appointments. In the case of men who offered their services at a lower rate than the one fixed by the other men in any district influence should be brought to bear on such men to bring them within the fold; if reasonable methods failed stronger measures would have to be taken. Consultants would be requested to refuse to meet them in consultation; means would be taken to let the public know that they were not acting in consonance with the views of the profession generally, and they would be ostracised both socially and professionally.

Dr. ALEXANDER STEWART (Manchester) remarked that it had always been acknowledged that the profession had put the claims of humanity before any kind of self-interest. The labourer, however, is worthy of his hire, and it behoved men nowadays to look after their own interests more keenly than they had hitherto done. Dr. Stewart believed that the disappearance of apprenticeship had been the cause to a large extent of the breaking down of the harmonious action which existed in the profession in former times. It should be their earnest endeavour to foster *esprit de corps*, to promote good fellowship. Coöperation and combination oppress them from without, and therefore it was necessary for them to band themselves together to prevent that oppression. He believed that a system of provident dispensaries worked by the profession itself would put an end to hospital abuse. His opinion was that the branches of the Association were too unwieldy and too cumbrous to deal with local organisation, and suggested that the Parliamentary divisions should be fixed on as the units of organisation.

Dr. W. FRASER (Salford) advocated using the branches as centres of local organisation and for no other purpose. Where the branches covered a large area districts should be formed for the purposes of combination and defence. He also thought that the branches should nominate the members of the Council and that the members generally should elect them by means of voting papers.

Dr. LOVELL DRAGE (Hatfield) demonstrated by an example what could be done by using existing bodies for purposes of local organisation; the strength of that organisation must depend upon the strength of individual units and individual cohesion. The profession must look forward to the time when the British Medical Association will possess a strong executive authority, which will not only form a support to the local organisation, but which will deal with all matters affecting the interests of the profession as a whole.

Dr. W. L. MUIR (Glasgow) instanced the case of a local association of medical men in Glasgow which had been successful in resisting the claims of the Procurator Fiscal to obtain evidence from medical men without fees. They had also been successful in obtaining fees for all School Board certificates. He (Dr. Muir) believed that the question of medical politics should be taken up more by the branches of the Association.

Mr. JAMES ERSKINE (Glasgow) said that the result of the discussion appeared to him to be that all organisation of the profession, local and general, could only be carried out through the branches of the British Medical Association. Any other procedure in the way of local organisation would be futile and pettifogging. There was a strong tendency in the direction of the public taking even more unfair advantages of the services of the profession than in the past. The great extension of general infirmaries and charitable institutions, the provision of hospitals for infectious disease maintained by rates, and the public health provisions in general were making the people more and more expectant of free treatment.

The General Medical Council.

Dr. A. G. WELSFORD (Dover) then read a paper dealing with the Powers and Performances of the General Medical Council.

Mr. VICTOR HORSLEY (London) wished first to draw the attention of the Ethical Section to the extraordinary autocratic powers bestowed by the General Medical Council on its President, and he showed that the President (Sir Richard Quain) had been given such liberty of action that the direction of the whole procedure of the penal matters, whether professional or lay, was practically vested in him. Mr. Horsley further alleged that the President had taken upon himself to refuse all explanation or information the production of which alone could justify his conduct. The standing orders of the Council were clearly drafted in such a manner as to preclude any case receiving a just and proper hearing if the President chose, for reasons he will not specify, to intervene. In conclusion, he urged that it was the duty of the profession to press upon the members of the General Medical Council the necessity of change in the presidential office.

Dr. GLOVER (London) was invited by the President of the Section to speak, and after thanking the meeting for the courtesy extended to him remarked that the indictment brought by Mr. Victor Horsley was a very serious one, and what made it the more serious was the fact that it appeared to be supported by evidence of a very strong nature. He (Dr. Glover) informed the meeting that some alteration had already been brought about by the action of the Penal Committee. He was of opinion that the colleges and universities should exercise their disciplinary powers more freely than they had hitherto done. It was, he said, most desirable that wrongdoers should be cautioned before they had continued to act unprofessionally for any length of time.

Dr. JONES MORRIS (Portmadoc) in a vigorous little speech related to the meeting the difficulties he had encountered in obtaining information from the officials of the General Medical Council in a case the particulars of which had been sent to the Council by the North Wales Branch.

FRIDAY, JULY 31ST.

The Ethics of Advertising.

Dr. WILLIAM BRUCE, the direct representative for Scotland on the General Medical Council, opened a discussion on the above subject. Advertising, he said, was generally held to be unprofessional, and yet to a certain extent it was practised even in the highest spheres. Whatever shape it might assume, its tendency was undoubtedly pernicious and it should be put down. Plainly this was a duty the General Medical Council could not well discharge itself. But it might, as the guardian of the interests of the whole body of practitioners, very well lay down some general recommendations. The proper bodies to enforce these, in the first place, were the different degree-granting corporations and universities. It was for them to watch over their licentiates and graduates and to strike off all such as disobey their laws. Legal decisions had shown how much power might be safely wielded in this way. If the universities had not the necessary authority they should follow the example of the corporations and at once obtain it by Act of Parliament. But the question still remained how far professional opinion by itself could stamp out such violations of medical etiquette. There were three channels through which they might hope to bring professional feeling to bear in the way of what might be termed moral pressure. One was the British Medical Association and its branches. Already the branches had done good service, and now the parent association had bestirred itself in the way of advancing ethical progress by instituting an ethical section in connexion with its annual gatherings in which general questions of medical morals were discussed. A standing committee, to whom particular grievances or difficulties might be referred, would, in his opinion, be a still greater reform. If this body were composed of men of mark their judgment, he believed, would command the deference of even defaulters, and gradually a set of precedents would be established, and in time an authoritative code issued, by their august professional parliament. The other channel was the press. Questions of etiquette were constantly referred to the journals. It was, however, a weighty responsibility, and he believed the press would willingly be relieved from the burden of this work. The mere publication of unseemly advertisements had done a great deal to check such effusions. Other forms of advertising had been restricted, such as those of signed bulletins and the advertising of medical publications in the columns of general newspapers. There might be even still fewer bulletins issued, and it would be a great step in advance if it were regarded as a breach of etiquette to issue them with names attached, or, in other words, signed. There was really no absolute necessity for signatures, and the terms of the announcements should be as short and simple as possible. Any other legitimate information wanted could well be supplied through the medical journals. It was scarcely necessary to mention, unless it be to condemn, the practice of advertising purely medical books in the lay press. This was surely one of the vainest, or, on the other hand, one of the most brazen-faced, means of advertising one's self. The third means of punishing the professional advertiser was to refuse to meet him in consultation. Undoubtedly this was a powerful engine if properly worked. It must be set in motion by the local practitioners affected, who might well refuse to meet any man, however valuable his counsel, if he attempted in any way to cover the erring sinner. But they must reason the matter out with the consultant and take care to carry the public along with them. Here lay the difficulty. If the public believed that any particular practitioner was boycotted by his *confrères* it would undoubtedly take his side, and he feared it will be a long time before the poorer classes saw that medical advertising was a crime. The public said, and no one could gainsay the proposition, that it was the duty of a medical man to try to save life, and if he could do that all merely technical rules as to his conduct must for that end be cast aside. Reverting to a point already insisted upon, he said that the real guardians of the morals of medical men should be the councils of the colleges and universities, and they should see to it that no one infringed any rule or bylaw with impunity, and among their regulations should be one striking plainly and strongly against all advertising in every form and shape. It was one argument more in favour of the democratic form of medical government in our corporations and universities, and if graduates and licentiates could make their voices more effectually heard in the councils of these bodies, and be altogether more interested in the management of their affairs, they should soon see such strong pressure brought to bear upon the powers that be that this complaint, as well as others, would quickly get eradicated from the body politic, and the lists of licentiates and graduates would be kept pure from contamination. Finally, they should not magnify the evil. It was not generally diffused nor were there many prominent cases. On the whole, they had good reason to be proud of the general good behaviour of medical men in the matter of modestly refraining from publicity as well as from other more flagrant misdemeanours.

THE ANNUAL MUSEUM.

(*Concluded from p. 510.*)

IV.—SANITARY APPLIANCES, DISINFECTANTS, &c.

Sanitary appliances were not, perhaps, quite represented on the scale which their increased importance in medicine demands. We have already noticed, under the heading of medical and surgical appliances, the exhibits of aseptic instruments for surgical use, together with the antiseptic solutions employed in operations, but we refer under this heading more particularly to the apparatus used in practical sanitation, such as disinfectants, filters, disinfectors, &c. In this connexion, perhaps the most fully stocked exhibit was that of the Sanitas Co., Limited (Three Colt-lane, Bethnal Green, E.), who, in addition to the now well-known manifold forms of Sanitas disinfecting fluid, including various soaps, a sheep dip, and tooth powder, showed also their patent sulphur fumigating candles for general disinfecting purposes "Sulphugators" were also a feature of the exhibit. They consist of rolls or bandages coated with sulphur, so that when a light is applied they burn very freely, giving off sulphurous acid in abundance. Disinfection by means of steam was represented in the equifex disinfection appliances by Messrs. Defries and Sons (147, Houndsditch, E.C.). These comprised a disinfectant sprayer for use in disinfection of rooms, a steam steriliser for dressings, instruments, &c., and an excellent series of photographs of saturated steam disinfectors, portable disinfectors, including low-pressure machines for villages, &c. A useful instrument for indicating ventilation was shown in action in this section. The exhibit could not be complete without a display of the several forms of Pasteur filters, of which Messrs. Defries are the sole agents in this country. An interesting application of the Pasteur tube was shown in the aseptic irrigator for operation-rooms and in the laboratory filters for the preparation of serum. The Lawes Chemical Company (59, Mark-lane, E.C.) displayed their disinfectant preparations to advantage. As we have elsewhere shown, these preparations are reliable in containing a definite quantity of efficient disinfectant. The articles shown included Lawes' fluid, sanitary powder, and soaps, the disinfectant basis of all of which is active tar acid free from inert coal-tar oils. The antiseptic and disinfectant value of Jeyes' creolin compounds is well known. The Liverpool Lint Company's exhibits were well entitled to attention. In addition to flax and cotton lints of the highest quality and bandages, and specially prepared and carded absorbent cotton wools, they showed an excellent material for a splint padding composed of absorbent cotton and carbolised tow. To this list should be added an excellent assortment of transpirable wool goods, &c., the merit of the fabric being that, knitted from the finest lambswool, it presents a thick nap or pile on the inside surface, making it light, warm, and comfortable for winter wear, while at the same time, being porous, it acts well when profuse perspiration takes place. Amongst Messrs. Woolley, Sons, and Co.'s (Manchester) exhibits should be mentioned, under this section, a phenate of soda solution and phenate of soda lozenges, the latter of use in post-nasal catarrh and relaxed throat, and ozophene, an alkaline solution of the antiseptic principles of coal-tar which is said to possess powerful deodorising and antiseptic properties. Sanitary preparations in Messrs. Duncan and Flockhart's exhibit were represented in baumol soap, a pure, bland article admirably adapted for toilet purposes, and baumol-resorcin and salicylic acid soap, which are serviceable for washing the body during desquamation after scarlet fever. The exhibit also included antiseptic dermolia containing zinc oxide, carbolic acid, thymol, and wool-fat. This excellent formula should make it very useful in disorders of the skin. Hygienic Balm Soap was the sole article shown by Messrs. W. Bowden and Co. (Indian Balm Depôt, Barnstaple). It is pleasantly aromatic, with various

balsams, which are antiseptic, and the soap itself is superfatted and quite free from excess of alkali.

V.—MINERAL WATERS, BEVERAGES, &c.

Next to drugs this section affords the exhibitor plenty of scope in the art of decorating a stall and making it attractive. Perhaps the most imposing display in regard to artificial mineral and aerated waters was that of the Chemists' Aerated and Mineral Water Association, Harrogate, London, Bristol, and Mitcham, who, in addition to showing in syphons aerated waters made from pure materials offered also piperazine and sulphuric lemonade for inspection and trial. Next should be mentioned the well-arranged stall of Messrs. Ingram and Royle (52, Farringdon-street, E.C.), who are the sole agents for the State springs of Vichy and Vichy water. The exhibit included the alkaline lithiated waters of Carlsbad, and its salts, and Oberbrunnen water, the interesting saline sodio-lithiated spring in Silesia, which has proved of benefit in uric acid diatheses and in rheumatoid affections. Saline purgative waters were well represented by Hunyadi Jànos (Trafalgar-buildings, Charing-cross, W.C.), and Apenta (Apollinaris Company, 4, Stratford-place, Oxford-street, W.), both Budapest waters, and by Condal water (7, Lambeth-hill, E.C.), a natural aperient from Rubinat in Spain, which contains a large excess of sulphate of soda over the corresponding salt of magnesia. Natural alkaline carbonated waters again were represented in respectively the "Queen" and "King" of table waters—Apollinaris (*vide supra*) and Johannis (25, Regent-street, S.W.). A very interesting demonstration of Harrogate balneo-therapeutic methods was afforded to the visitors by means of some excellently designed and exact models of the baths and douches of this famous health resort. The exhibit included also specimens of the strong and mild sulphur waters, magnesia water, and iron waters, which are well known in the same connexion. Leamington is rapidly coming to the front as a health resort of the same kind. Besides an admirably appointed pump-room and baths Leamington also boasts a natural aperient alterative mineral water, a sulphur water, and a chalybeate water. Lastly, a stall covered with descriptive pamphlets and with photographs on the wall served to show that the ancient mineral waters of Bath are still available as adjuncts in medical treatment.

VI.—MISCELLANEOUS OR UNCLASSIFIED.

Last year the paragraph coming properly under this section was devoted to a description of various exhibits, including apparatus used in clinical testing and certain special articles of clothing designed especially for abnormal cases, such as boots and shoes for the treatment of hammer-toe, &c., but there was a practical absence of exhibits of the same order at Carlisle, so we may conclude our notice of the Museum by a short list of the books that were shown, including some of the new announcements made by the publishing firms who were represented.

VII.—LITERATURE, &c.

Mr. Young J. Pentland announced the following interesting list of new works preparing for publication:—"Manual of Bacteriology," by Robert Muir, M.D., which will belong to the list of Pentland's students' manuals; "Text-book of Physiology," edited by E. A. Schafer, F.R.S., with contributions by Professors Burdon Sanderson, Gaskell, Sherrington, M'Kendrick, Haycraft, Halliburton, Moore, Langley, Gamgee, Penbrey, Starling, Rivers, &c.; "A Text-book of Medicine," edited by G. A. Gibson, M.D., D.Sc., to which the following will contribute: Drs. W. R. Gowers, J. Mitchell Bruce, R. Maguire, F. W. Mott, Stephen Mackenzie, Hector Mackenzie, Hale White, Lauder Brunton, Sidney Martin, W. Pasteur, Patrick Manson, J. W. Moore, Douglas Powell, Thomas Oliver, W. T. Gairdner, Wm. Hunter, J. O. Affleck, Alex. Bruce, R. W. Philip, &c.; "Diseases of the Heart and Circulation," by G. A. Gibson, M.D., D.Sc., which is to form vol. vi. of Pentland's Medical Series, while vol. viii. will be "The Principles of Treatment," by J. Mitchell Bruce, M.D.; and, lastly, a further addition to Pentland's students' manuals will be "Practical and Operative Gynæcology," by J. Clarence Webster, M.D. In addition to the excellent series of manuals for students of medicine published by Cassell and Co., the recently completed work on a System of Surgery, edited by Frederick Treves, F.R.C.S., completing vol. ii., forms one of the recent works in this publisher's list. Amongst the new works submitted for inspection on the stall of the Rebman Publishing Company, Limited, were "The American Year-book of Medicine and Surgery," edited by George M. Gould, M.D., and "An American Text-book on Obstetrics," in which the excellence of the illustrations is a feature, edited by Richard C. Norris, M.D., and the art portion by Robert L. Dickinson, M.D. Lastly, this company announce the publication shortly of "A Text-book of Applied Therapeutics for the use of Practitioners and Students," edited by J. C. Wilson, M.D., and to which some forty-two medical men have contributed. The work will be published in two imperial octavo volumes of about 700 pages, both fully illustrated with woodcuts and many half-tone plates.

ERRATUM.—At line 20, page 508, of our last issue for "Haddington" read "Edinburgh."

THE THIRD

INTERNATIONAL CONGRESS OF DERMATOLOGY:

LONDON, AUGUST, 1896.

CLINICO-PATHOLOGICAL MUSEUM.

NEVER has there been such a collection in one place of clinical and pathological material relating to dermatology. Microscopes, microbes, pathological specimens preserved in spirits and dried, coloured sketches, photographs plain and coloured, models in wax and plaster, transparencies, books old and new, and everything that relates to the observation and study of skin disease, occupied every available inch in the large laboratory of the Examination Hall. A month would be well spent in the study of this collection, but not only was it impossible to notice everything, but it was difficult to know where to begin when so much wealth surrounded the observer on all sides.

(*a*) *Bacteriology and Microscopes.*

One of the most prominent features of the Museum was the immense collection of specimens illustrating the ringworm group. There were no fewer than eight contributors of specimens bearing on ringworm.

Dr. SABOURAUD showed a very complete set of cultures of the Trichophytons, and the Microsporon Audouïni, between which he draws a sharp line of demarcation, differing in this respect from some other observers. A summary of his researches is given in our report of the discussion on ringworm in the Dermatological Section.[1] Exhibits of ringworm cultures were also shown by Professor ROSENBACH (Göttingen), Dr. DUCREY and Dr. REALE (Naples), and Professor MIBELLI (Parma). The researches of the first-named have been carried out on the deep-seated forms of the trichophytic diseases. His experiments show that the coöperation of pus-producing organisms need not be regarded in the operation of deep trichophyton fungi, which are themselves pyogenic. Our grateful acknowledgments are due to these foreign observers, who have brought over such beautiful collections at the cost of so much trouble and expense. It is a curious thing worth noting that the commonest form of ringworm found in England does not seem to exist in Italy, this being part of the well-known fact that ringworm species seem to have a marked geographical selective distribution.

England was chiefly represented by the collections of Dr. COLCOTT FOX and Dr. BOXALL, whose researches we noticed in our description of the British Medical Association's Museum last year.[2] Since then these observers have found a special new group of trichophytons, coming from the case of a woman who contracted the disease from a cat which was affected with the malady. They have found fourteen other cases of this species, showing the same fructification, cultures, and size of spores. These gentlemen, in continuing their investigations, agree with Dr. Sabouraud in finding three kinds of parasites—viz., (1) microspora, which is the commonest form, causing from 85 to 90 per cent. of their ringworm cases; (2) endothrixes; and (3) ectothrixes. A very complete series of plate and tube cultures, with photographs and microscopic specimens, are shown. The endothrix cultures are characterised by being nearly always crateriform. The ectothrixes are always of an animal origin, coming from dogs, horses, calves, cats, &c.—

[1] THE LANCET, Aug. 15th, 1896, p. 466.
[2] THE LANCET, Aug. 10th, 1896, p. 378.

Mr. MALCOLM MORRIS showed plate cultures of the trichophytons and microsporon; and Mr. H. G. ADAMSON also exhibited a set of carefully prepared cultures and specimens. This handsome collection of the trichophytons and microsporons by so many able observers calls for two remarks. First, they illustrate the fact that after all there is little that can be said to be new in science, because in 1843–4 Grüby of Paris differentiated nearly all the various forms of ringworm, but his observations were lost and forgotten until Dr. Sabouraud re-discovered the same facts and added fresh ones; secondly, they show that a great deal of scientific work is done with, at the time, but very little apparent practical application. The only practical outcome to which all this excellent work applies is to enable us frequently to trace ringworm and sycosis to an animal origin and to speak as to the probable duration of a given case.

Professor CAMPANA (Rome) showed a series of Cultures of Leprosy grown anaërobically in hydrogen, but they struck the observer as being unusually luxuriant for that microbe. The usual life of the organism is five or six days, and the growth consequently extremely scanty.

Dr. NEISSER (Breslau) showed illustrations of a new and curious disease of the skin, which he described under the name of Blastomycosis or Saccharomycosis of the Skin. The only patient observed was a woman, about sixty years of age, who presented scattered nodules all over the body about the size of a pea to a walnut; also large diffuse stretches of soft phlegmonous skin, especially on the legs. In both of these lesions a microbe was found (figured *in situ* in the sketches) which somewhat resembles yeast. Dr. Neisser regards it as one of the saccharomyces and the lesion as a kind of fermentation process in the skin setting up inflammation and resulting in the formation of granulation tissue.

Dr. VAN HOORN (Amsterdam) showed pictures of microscopic specimens of three kinds of organism he has found in Seborrhœa Capitis: (1) the bottle bacillus; (2) saccharomyces (both of which are probably saprophytic organisms); and (3) a short bacillus supposed by him to be the cause of the disease; but the identity of all these forms is still open to discussion and the researches of this observer are not yet complete.

A large number of *Microscopes* were arranged all down one side of the laboratory, and the subject illustrated was varied from day to day according to the subject taken in the Dermatological Section. Thus: First day, specimens of prurigo; second day, lichen and keratosis; third day, trichophytons and microsporon Audouïni. The store of the last-named seemed to be inexhaustible, but it is only fair to say that of all the excellent specimens shown those of Mr. H. G. ADAMSON represented the triumph of stained specimens, for while the microbes were clearly and beautifully stained the staining medium was more thoroughly extracted from the hair and tissues than in any of the others. This is always a difficult matter, owing to the density of the hair shaft, and can only be done by anilin oil containing iodine or picric acid.

(*b*) *Models and Casts.*

Models and casts were brought from France, Italy, and Russia. Diseases of the skin lend themselves peculiarly to this form of representation; and it is curious that Guy's Hospital should be the only British representative. The magnificent case of specimens brought from the Musée Saint-Louis of Paris should earn our sincere gratitude to our French neighbours, Dr. Fournier, Dr. Besnier, Dr. Jacquet, and their assistants, for their handsome contribution, which had the merit also of being accompanied by a specially printed descriptive catalogue giving the clinical history of the cases. Among the many beautiful specimens which were exhibited may be mentioned scleroderma—where the delicate shades of tint were true to life—and cutaneous tuberculosis in its many various forms; and we would especially notice seven specimens of the kerion of Celsus—that is to say, suppurative folliculitis due to trichophyton in various positions. In all of these the appearance described by Celsus under the name "kerion" was admirably represented—a raised, oval, crimson, inflammatory surface dotted with suppurating points representing the orifices of the sebaceous follicles. The clinical history of all these reveals animal contagion, such as that of one patient, a stableman, who used to wash his face in the horse bucket, and in most of them the trichophyton was identified. They illustrated two facts: (1) that nearly all adult cases of ringworm, whether of the scalp or other parts, are of animal origin, and that careful search reveals the existence of one of the species of the trichophytons; and (2) the fact which is becoming more and more firmly established that sycosis of the beard is probably due to the trichophyton parasite. Many of these specimens we might notice, but we must pass on to the handsome collection brought from Russia by Professor Tarnovsky, one of whose models represented the trunk of a man with "cancer of the skin."

(*c*) *Pathological Specimens.*

Pathological specimens had been collected from many of the London museums, and comprised specimens of rare skin diseases, actinomycosis, Paget's disease of the nipple, sarcoma, carcinoma of the skin (in one of which the cancerous nodule has been dissected so as to show that the deposit is actually in and not beneath the skin), leprosy, and many curious specimens of horns, deformed nails (amongst which might be mentioned the little finger-nail of a Chinese grandee with its companion bamboo shield), and various syphilitic lesions of the larynx, viscera, and bones. There was also a large collection of skulls showing syphilitic and mercurial lesions and revealing the fact that the frontal bone is the most frequent starting-point of the former disease, also that tertiary syphilis is mostly a formative lesion, at any rate in its earlier stages, though afterwards it may be destructive. Four specimens of syphilitic joint disease showed the characteristic bony enlargement from the involvement of the periosteum of the adjacent shaft, and one showed that erosion of the cartilages may take place in the later stages. Three specimens of the heads of fowls attacked by framboesia (yaws) showed the fungating nodules of this disease, and were particularly interesting in view of the theory some hold that yaws is a form of syphilis, for it has never yet been possible to produce syphilis in any animal. No description accompanied these, but there is apparently no reason to doubt the diagnosis.

A series of tumours of the skin was shown, such as various cysts, sebaceous and dermoid, bottle-noses, elephantiasis, leprosy (a very handsome collection), and onychia gryphosa. Two specimens (one of the shoulder- and another of the wrist-joint) showed the joint disease from syringomyelia and revealed the fact that the characteristic lesion is an extreme atrophy and absorption of the bone-ends leading to a shortening of the bones which enter into the joint formation. The latter also showed the characteristic deformity of nails and shortening of the fingers.

This collection of pathological specimens would have been more interesting had a brief description or the clinical records accompanied each.

Pictures.

The pictures represented a vast storehouse of clinical records, but we must content ourselves with noticing a few. Among the best undoubtedly were those sent by Professor FOURNIER which showed the superiority of a coloured photograph over a badly executed sketch. Among these were various syphilitic lesions, including a valuable series of infantile syphilis and a specimen of syphilitic pigmentation—the existence of which some dispute—which consists of a pigmented area over the trunk, mottled with white patches like rain-drops. The drug eruptions formed another interesting series, such as those due to bromide and iodide. In slight cases these eruptions consist of large, hard papules, which may go on to suppuration resembling acne pustulosum, and in some cases, in cachectic individuals, they may consist of pustular elements of varying size, large crusts being sometimes formed. All these varying kinds of eruption were well displayed. Five pictures of hydrargyrism showed a uniform crimson eruption with macules of the same colour beyond the edge scattered over the trunk and thighs. It is not stated whether the mercury was administered by inunction, internally, or hypodermically; but it should be borne in mind that a similar erythematous eruption may arise from the external application of iodoform, and consequently there is nothing specific about this eruption. Another was a beautiful picture of epithelioma supervening on lupus, which illustrated once more the fallacy of the idea that tubercle and syphilis are in any way mutually protective.

Professor STOUKOVENKOFF showed a series of admirable sketches of that serious disease Sarcoma Cutis Idiopathica Multiplex (Kaposi type). The disease first shows itself as purple nodules both on the palms of the hands and the soles of the feet. These nodules multiply and involve the digits, palms, and dorsa of the hands and feet. There were several pictures bearing on the subject of sarcoma cutis, a most interesting affection which throws immense light upon the pathology of the sarcomata, if only from the fact that certain varieties of the

lesion—but which is yet uncertain—are capable of undergoing involution, as in a case under the care of Dr. Radcliffe Crocker, alluded to in our report of the demonstrations of cases. There was also a picture in the exhibition (shown by Dr. Stephen Mackenzie) of a case of Multiple Pigmented Sarcoma of the Kaposi type involving the hands and feet. This case has been recorded in the Transactions of the Royal Medical and Chirurgical Society and the growth was verified microscopically. One leg was removed, and subsequently to the operation the growths on the other three limbs underwent spontaneous involution and disappeared without any treatment. A large number of pictures were lent by Dr. Radcliffe Crocker, amongst which we noticed one labeled uræmic erythema, a coloured sketch of a leg showing the desquamative disorder which so frequently attacks renal patients, and which is probably of the same nature as the Epidemic Skin Disease, which is specially prone to attack the subjects of acute and chronic Bright's disease. Not far from this was a coloured photograph of a severe case of the same malady, shown by Dr. Stopford Taylor, which revealed, as do those of Professor Fournier, the great advantage of displaying disease by coloured photographs rather than by indifferent coloured sketches. But some most artistic productions executed by Miss Mabel Green were shown in this exhibition by Dr. Pringle; for example, there were two coloured sketches of tuberculous ulceration of the skin, showing the uneven red base and the undermined edges of this affection with lifelike truth, and two others of equal excellence, from the same pencil, of lichen planus and granuloma fungoides from a case recorded by Dr. Pringle in the Transactions of the Royal Medical and Chirurgical Society.

Dr. CORLETT (Cleveland, U.S.A.) showed an excellent life-size coloured photograph entitled Dermatitis Hiemalis, a disease characterised by circumscribed eczematous patches on the hands and wrists, recurring each winter and disappearing spontaneously in the summer or when the patient is sent to a warmer climate. The disease was first described by Mr. Hutchinson, though his cases were not so distinctly eczematous. Dr. Corlett has collected fourteen cases, the youngest patient being a girl aged twenty-one years.

Dr. NEISSER showed a series of transparent stereoscopic slides of great excellence, among which was an interesting case of lichen, with consecutive leucodermia, a condition not met with in this country.

Books.

Dr. PAYNE contributed a most interesting collection of old books bearing on skin affections, such as scabies, variola, leprosy, syphilis, and scrofula. These comprised an almost complete collection of ancient dermatological literature.

Apparatus.

Modern books and apparatus were for the most part in the Trade Museum, but Dr. NEISSER showed his syringe for the hypodermic injection of mercury in syphilis, which is a most valuable means of treatment, though attended by the difficulty of keeping the syringe sterile. This Dr. Neisser does by preserving it always in a paraffin jar, and the formula he gives is 10 per cent. of salicylate of mercury or of calomel with 10 per cent. of alapurin, 16 parts of solid paraffin, and 64 parts of liquid paraffin, thoroughly mixed.

The Trade Museum.

This was held in a large vacant room in the Hôtel Cecil adjacent to the Examination Hall. Among the exhibits may be mentioned Chaulmoogra oil and various other remedies, such as the oleates of tin, alumina, and nickel, which are now coming into use in the treatment of different skin diseases; a very excellent ethereal antiseptic soap; dressings done up in air-tight cases; an improved form of Paquelin's cautery, in which the benzine is contained in a sponge placed in a compartment between the rubber ball and the handle; besides various plasters and plaster-mulls and gelatin preparations which can now be obtained in England. Specimens of Filmogen, a new vehicle for the painting on of salicylate, ichthyol, and other remedies, devised by Dr. Schiff of Vienna, were also shown. It somewhat resembles collodion flexile and consists of a solution of cellulose nitrate in acetone, with the addition of castor oil. The advantages claimed for it are that it is capable of containing, either in solution or suspension, all the various applications used in skin disease and that it forms an elastic coating which does not break or split. Chromographs and various other methods of illustration were exhibited and a large number of books representing the current literature of the subject.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board at the quarterly meeting of the examiners in the subjects indicated under the "four years" regulations:—

Part I., Chemistry, including Chemical Physics:

Beck, William, Aberdeen and Edinburgh.
Cope, Ricardo, St. Bartholomew's Hospital.
Ellis, Martin Francis, Yorkshire College, Leeds.
Galsworthy, Lawrence, St. Bartholomew's Hospital.
Goadby, Kenneth Weldon, Guy's Hospital.
Lange, Massillon Henri Joseph, King's College Hospital.
Owen, Arthur James, Westminster Hospital.
Robertson, Arthur William, Edinburgh and St. Bartholomew's Hospital.

Part II., Materia Medica:

Ambrose, Alfred Cole, Guy's Hospital.
Anderson, Maurice Clare Bielefeld, St. Mary's Hospital.
Bailey, Thomas Hill, King's College Hospital.
Clapham, Edward William, London Hospital.
Clift, Thomas James, Mason College, Birmingham.
Daley, William, University College, Liverpool.
French, Gilbert Edwin, St. Bartholomew's Hospital.
Hunter, Frank Smallpage, Mason College, Birmingham.
Instone, Bradney, Guy's Hospital.
Laidman, Herbert Lancaster, Owens College, Manchester.
Lange, Massillon Henri Joseph, King's College, London.
Leslie, Lewis Francis, London Hospital.
MacMaster, Hugh, Sydney and Edinburgh.
Marrack, George Conyns, St. Bartholomew's Hospital.
Owen, Arthur James, Westminster Hospital.
Pearson, George Bruce, Guy's Hospital.
Pettigrew, William, Firth College, Sheffield.
Pratt, Ernest Camden, Mason College, Birmingham.
Read, Walton Rix, private study.
Robertson, Arthur William, Edinburgh and St. Bartholomew's Hospital.
Turner, James William, Mason College, Birmingham.
Verity, Frederick Gerald, Charing-cross Hospital.
Young, George, Dublin.

Part III., Elementary Physiology:

Cooke, Percy Seymour, Charing-cross Hospital.
Ellis, Martin Francis, Yorkshire College, Leeds.
Galsworthy, Lawrence, St. Bartholomew's Hospital.
Goadby, Kenneth Weldon, Guy's Hospital.
Houchin, Edwin Augustus, Middlesex Hospital.

The following gentlemen passed the First Examination of the Board at the quarterly meeting of the examiners in the subjects indicated under the "five years" regulations:—

Part I., Chemistry and Physics:

Alderman, Harry Cole, Yorkshire College, Leeds.
Anderson, William Monro, Charing-cross Hospital.
Arch, Arthur James, Mason College, Birmingham.
Argles, Ernest Edward, St. Mary's Hospital.
Arnould, Louis Arthur, St. Paul's School, West Kensington.
Ascough, Matthew Thomas, Owens College, Manchester.
Atkinson, Samuel Ernest, Yorkshire College, Leeds.
Awdry, Arthur John, Mason College, Birmingham.
Baker, Harry Cecil, St. Mary's Hospital.
Bannerman, Charles Harold, University College, Liverpool.
Barlet, Jehan Meredith, St. Mary's Hospital.
Bateman, Herbert Raymond, St. Thomas's Hospital.
Beale, Joseph Richard, St. Thomas's Hospital.
Bekenn, Justin James, Mason College, Birmingham.
Benson, Alick Cole, St. Paul's School, West Kensington.
Bevir, George, London Hospital.
Blick, Penn William Curle, Oxford University.
Blizzard, Walter Harry Stanley, Mason College, Birmingham.
Bond, Cecil William, St. Mary's Hospital.
Bonney, Ernest Henry, Charing-cross Hospital.
Boyden, Arthur Gerald, Edinburgh.
Bransbury, Henry Arthur Bramston, St. George's Hospital.
Causton, Hubert Cyril, University College, London.
Clarke, Harry Edward, St. Mary's Hospital.
Coates, John, St. Thomas's Hospital.
Cross, Francis George, Guy's Hospital.
Curtis, Frederick, Guy's Hospital.
Da Silva, Joseph Clement Justinian, Guy's Hospital.
Davey, James, London Hospital.
Davidson, William Henry, London Hospital.
Davies, Charles Woolmer, St. Thomas's Hospital.
Davies, Walter Ernest Llewellyn, St. Bartholomew's Hospital.
Davies-Oorrantoski, Vladimir, Glasgow and University College, Liverpool.
Dawson, Edwin Norman De Vere, St. Thomas's Hospital.
Denniston, William Edward, St. Thomas's Hospital.
De Vine, Arthur Wilson Smyth, Mason College, Birmingham.
De Morgan, Augustus, St. Mary's Hospital.
Dickie, William Stewart, Glasgow University.
Donaldson-Sim, Ernest Alfred, St. Bartholomew's Hospital.
Downton, Arthur Sydney, London Hospital.
Dunstan, Bernard Mainwaring, St. Thomas's Hospital.
Edwards, Frank Payne, Cambridge University.
Edwards, Thomas Henry, St. Thomas's Hospital.
Enderby, Thomas Sidney Dawber, St. Thomas's Hospital.
Enthoven, Leslie Frederick, Cambridge University.

Faber, Hamilton Stanley, St. George's Hospital.
Forbes, Cyril Donald Edward, St. George's Hospital.
Forrest, Frank, Owens College, Manchester.
Foulkes, Samuel Newall, London Hospital.
Furley, George Frederick, St. Bartholomew's Hospital.
Garle, Robert Hubert William, St. Thomas's Hospital.
Gater, Arthur William, Guy's Hospital.
Geraty, Laurence Unthank, University College, Nottingham, and Dublin.
Gilbert, Walter Raleigh, St. Thomas's Hospital.
Gill, Clifford Allchin, University College, London.
Graham, Cecil Irving, St. Mary's Hospital.
Graham, William Ernest, St. Bartholomew's Hospital.
Grellett, Harold Rawdon, Bedford Grammar School.
Griffin, Gerald, London Hospital.
Hagger, Roger Lionel, University College Hospital.
Hamill, John Molyneux, St. Paul's School.
Hammerton, George Herbert Leonard, Firth College, Sheffield.
Hannay, Maurice Gilbert, Charing Cross Hospital.
Harrison, William Rhodes, St. Mary's Hospital.
Hay, Malcolm Bell, University College Hospital.
Haydon, Walter Turner, St. Thomas's Hospital.
Hayne, Percy Alfred, St. George's Hospital.
Hogg, Ernest Henry, Middlesex Hospital.
Hogg, William John, Queen's College, Belfast.
Hollick, Bernard Septimus, Mason College, Birmingham.
Hughes, Leslie Edward, St. Bartholomew's Hospital.
Humphreys, George Frederick, St Paul's School, West Kensington.
Humphreys, George Jacks, St. Bartholomew's Hospital.
Ind, Charles Uncles, St. Thomas's Hospital.
Jameson, Archibald Douglas, St. Thomas's Hospital.
Jew, Ernest, Glasgow University.
Johnston, Lamber, Arthur Wellesley, Mason College, Birmingham.
Jones, Alfred Lancelot, St. Mary's Hospital.
Jones, David Morgan, Glasgow.
Jones, Richard Arthur, Charing-cross Hospital.
Jones, William Forsyth, Charing cross Hospital.
Keeling, Hugh Nevill, Bedford Grammar School.
Kempthorne, Hugh Dorsett, Guy's Hospital.
Ker, William Percival, Guy's Hospital.
Kirton, David Henry Jeavons, Mason College, Birmingham.
Leonard, Napoleon, St. Bartholomew's Hospital.
Levick, George Murray, University College, London.
Lewis, George Jepson, Guy's Hospital.
Lewis, William Spencer, Owens College, Manchester.
Lipscomb, Neil, St. Bartholomew's Hospital.
Mandy, Percy Stephen, Guy's Hospital.
Martin, John Lemon, St. Mary's Hospital.
Mays, Charles Cecil Wildman, Firth College, Sheffield.
Meiklejohn, Norman Sinclair, St. Paul's School, West Kensington.
Mence, William Charles, St. Thomas's Hospital.
Moll, Otto Charles Henry Leopold, Guy's Hospital.
Morcom, Theophilus William, London Hospital.
Morrison, James Frederick, London Hospital.
Nash, Arthur Charles, Guy's Hospital.
Nash, Percy James, Guy's Hospital.
Nesfield, Vincent Blumhardt, St. Paul's School, West Kensington.
Newling, Harry Tudor, St. Mary's Hospital.
Newport, Alexander Charles, Charing Cross Hospital.
Pavitt, Percy George, Middlesex Hospital.
Peake, Sydney John, King's College, London.
Perkins, Eric McLeod, London Hospital.
Price, Ernest Walter, St. Bartholomew's Hospital.
Reynalds, Reginald, University College, Bristol.
Richards, Ralph Conrad, University College, London.
Roberts, Earnest, Guy's Hospital.
Roberts, George Rowland, St. Thomas's Hospital.
Roberts, Thomas Howard Frederick, Guy's Hospital.
Roper, Richard Snelling, Guy's Hospital.
Rose, Richard Aubrey De Burgh, University College, London.
Sall, Ernest Frederick, St. Mary's Hospital.
Sandiland, Digby Sayer, St. Bartholomew's Hospital.
Saunders, Leonard Douglas, St. George's Hospital.
Scott, Edward Spencer, London Hospital.
Seagrove, George Mervyn, St. Bartholomew's Hospital.
Segrefa, Francisco Arturo, Guy's Hospital.
Sells, Lionel, St. Thomas's Hospital.
Shelton-Jones, Ernest, Guy's Hospital.
Skelton, Dudley Sheridan, London Hospital.
Skey, John Evan, Westminster Hospital.
Sladen, Reginald John Lambart, London Hospital.
Sloane, Hans Hill, St. Bartholomew's Hospital.
Smith, Ernest George, St. Bartholomew's Hospital.
Smith, George Percy, Mason College, Birmingham.
Sodhi, Makhan Singh, London Hospital.
Soper, Gerald Morgan, St. Mary's Hospital.
Soper, Hugh Thomas Burrell, St. Paul's School, West Kensington.
Stanley, John Brentnall, Mason College, Birmingham.
Steele, William Lawrence, University College, London.
Stokes, Percy Southwell, Firth College, Sheffield.
Swindale, Henry Vernon, Middlesex Hospital.
Symons, Angelo Nelson, London Hospital.
Tayler, Frederic Ernest, St. Bartholomew's Hospital.
Tilbury, Robert, Guy's Hospital.
Tobit, Perry Praime, King's College, London.
Townroe, Eugene Dunbar, St. George's Hospital.
Tullock, Forbes Mavson Grant, St. Mary's Hospital.
Tweedie, Alexander Robert, St. Bartholomew's Hospital.
Upcott-Gill, Geoffrey Allen, University College, London.
Wadmore, James Christopher, University College, Bristol.
Walker, Ernest Ronald, Charing-cross Hospital.
Ward, Bernard Joseph, Mason College, Birmingham.
Wellington, Arthur Robartes, St. Mary's Hospital.
Whitaker, Roy Henry Rollinson, St. Bartholomew's Hospital.
Whitehead, John Henry Marsden, St. Thomas's Hospital.
Williams, Arthur Harold, London Hospital.
Wilson, Arthur Harold, Mason College, Birmingham.
Wilson, Hugh Cameron, St. Mary's Hospital.
Winder, Maurice Guy, St. Bartholomew's Hospital.

Part II., Practical Pharmacy:

Ackery, Edward Faulkner, private study.
Adam, Thomas, Firth College, Sheffield.
Addison, Joseph Bartlett, St. Mary's Hospital.
Alderman, Harry Cole, Yorkshire College, Leeds.
Amsler, Albert Maurice, St. Bartholomew's Hospital.
Atkinson, George James Smith, St. Mary's Hospital.
Batteson, Carol Luther, London Hospital.
Baxter, Charles Thomas, Middlesex Hospital.
Bekenn, Justin James, Mason College, Birmingham.
Bensley, Vernon Cyril, St. Mary's Hospital.
Boclet, Faustin Marcel, Charing-cross Hospital.
Body, Thomas Munn, St. Bartholomew's Hospital.
Bonney, Ernest Henry, Charing-cross Hospital.
Bostock, Arthur Hastings, St. Bartholomew's Hospital.
Bowden, Robert Culverwell, St. Bartholomew's Hospital.
Brodribb, Charles Hildred, St. Mary's Hospital.
Broomhall, Benjamin Charles, London Hospital.
Burd, Reginald Shirley, Mason College, Birmingham.
Chalk, Charles Launder, St. Bartholomew's Hospital.
Chater, Harold John, St. Mary's Hospital.
Clark, Reginald William, London Hospital.
Coke, William Francis Harriott, St. George's Hospital.
Couper, James, Charing-cross Hospital.
Cruddas, Hamilton Maxwell, St. Bartholomew's Hospital.
Dodd, Arthur Myddleton, University College, Liverpool.
Douglas, Kenneth Harington, London Hospital.
Downes, Thomas William Hardwick, St. Thomas's Hospital.
Dyson, John Newton, Guy's Hospital.
Esser, Samuel Jonathan David, London Hospital.
Evans, David Hayden, University College, Cardiff.
Fell, Robert, Guy's Hospital.
Felton, Edgar Hall, Guy's Hospital.
Fisher, Charles, St. Bartholomew's Hospital.
Foulds, Matthias Frederick, Owens College, Manchester.
Fullagar, Walter Swainson, St. Thomas's Hospital.
Fuller, William Anderson, Guy's Hospital.
Hall, Robert William Basil, Guy's Hospital.
Halliday, Stratford Dobie Tollemache, Middlesex Hospital.
Hannay, Maurice Gilbert, Charing-cross Hospital.
Hardenberg, Emile John Frank, Guy's Hospital.
Hardwicke, George, Yorkshire College, Leeds.
Harris, Thomas Arthur Ball, Firth College, Sheffield.
Harrison, Reginald Temple, St. George's Hospital.
Harvey, Percival George, St. Bartholomew's Hospital.
Henshaw, Harry William, St. Bartholomew's Hospital.
Hepper, Evelyn Charles, St. Bartholomew's Hospital.
Hingston, Clayton Alexander Francis, Middlesex Hospital.
Holyoak, Ernest William, St. Mary's Hospital.
Horridge, Frank, St. Bartholomew's Hospital.
Ind, Charles Uncles, St. Thomas's Hospital.
Jago, Thomas Dinnen, St. Bartholomew's Hospital.
Jellicoe, Stanley Coleman, Middlesex Hospital.
John, Ambrose Hilton, St. Bartholomew's Hospital.
Jones, Alfred Lancelot, St. Mary's Hospital.
Jones, John Henry, Guy's Hospital.
Jones, Thomas Caldwell Litler, St. Bartholomew's Hospital.
Kendal, Nicholas Joseph, Mason College, Birmingham.
Landmann, Alfred Emil, Yorkshire College, Leeds.
Lawson, James Ward, Charing-cross Hospital.
Leach, Herbert, Yorkshire College, Leeds.
Leah, Frederick Arthur, Owens College, Manchester.
Lewis, William Spencer, Owens College, Manchester.
Lindsey, Edward Vaughan, St. Bartholomew's Hospital.
Lister, Alfred Ernest John, St. Bartholomew's Hospital.
Littler, John Wishart, St. Thomas's Hospital.
Lloyd, Richard Harte, St. Bartholomew's Hospital.
Maltby, William Ernest George, St. Bartholomew's Hospital.
Marrett, Henry Norman, St. Bartholomew's Hospital.
Marshall, James Cole, St. Bartholomew's Hospital.
Mayer, Thomas Frederick Gisborne, London Hospital.
Mead, Edgar Preston, London Hospital.
Meadows, Sydney Manvers Woolner, Middlesex Hospital.
Michel, Arthur George, Charing-cross Hospital.
Murdock, Horace Thomas Thorns, Yorkshire College, Leeds.
Newton, Arthur Charles Duncan, University College, London.
Paddock, Thomas Danily, University College, Liverpool.
Palmer, Charles Ambrose, St. Thomas's Hospital.
Palser, John Edwin Ford, London Hospital.
Pearce, Thomas Massey, St. Bartholomew's Hospital.
Pern, Norman, St. Thomas's Hospital.
Pern, Sydney, St. Thomas's Hospital.
Potter, Godfrey Russell, Yorkshire College, Leeds.
Pridham, Arthur Tregelles, St. Bartholomew's Hospital.
Reid, Alfred, Guy's Hospital.
Ridout, Charles Archibald Scott, St. Bartholomew's Hospital.
Robertson, James Fenwick, St. Bartholomew's Hospital.
Robertson, James Frederick Guy's Hospital.
Ross, Philip Hedgeland, St. Bartholomew's Hospital.
Rowlands, Moses John, University College, Cardiff.
Sall, Ernest Frederick, St. Mary's Hospital.
Sawdy, Edward Charles, St. Mary's Hospital.
Sayer, Thomas, Yorkshire College, Leeds.
Sharpley, Christopher Wilfred, Yorkshire College, Leeds.
Sloane, Hans Hill, St. Bartholomew's Hospital.
Smith, Edgar Dyke, St. Bartholomew's Hospital.
Stallard, Nigel Frampton, University College, London.
Steen, Wilfred Alexander, London Hospital.
Symonds, Vivian Hood, Mason College, Birmingham.
Thornley, Robert Lewis, St. Bartholomew's Hospital.
Tullock, Forbes Mavson Grant, St. Mary's Hospital.
Tumber, Henry Shemeld, Firth College, Sheffield.
Tytheridge, Ainslie Burton, St. Mary's Hospital.
Vawdrey, Percy Llewellyn, St. Bartholomew's Hospital.
Walker, John Frederick, London Hospital.
Walker, Robert, St. Bartholomew's Hospital.
Weekes, Charles Peterson, Guy's Hospital.
Whitaker, Roy Henry Rollinson, St. Bartholomew's Hospital.

Wethered, Ernest, St. Bartholomew's Hospital.
Wilkinson, Edgar Sheldon, St. Bartholomew's Hospital.
Williams, Arthur Harold, London Hospital.
Wynne, Graham Shaw Arnold Smith, St. Bartholomew's Hospital.
Young, Thomas, St. Bartholomew's Hospital.

Part III., Elementary Biology:

Atkinson, Samuel Ernest, Yorkshire College, Leeds.
Baens, Johannes Adolphus, King's College Hospital.
Bailey, Charles Henry Farley, Westminster Hospital.
Bates, Joah Edward Lionel, Guy's Hospital.
Batchelar, Arthur, University College, London.
Batty, Herbert Ernest Jardine, Guy's Hospital.
Birch, Charles, Mason College, Birmingham.
Bradley, John Bird, Mason College, Birmingham.
Brandon, Arthur John Spiller, St. Paul's School West Kensington.
Bulteel, Cecil Edward, King's College Hospital.
Clarke, Harry Edward, St. Mary's Hospital.
Coram, Sydney, St. Bartholomew's Hospital.
Couzens, Alfred John, London Hospital.
Davies, Walter Ernest Llewelyn, St. Bartholomew's Hospital.
David, Archibald Sinclair, London Hospital.
De Vine, Arthur Wilson Smyth, Mason College, Birmingham.
Devitt, Herbert Pye-Smith, Cambridge University and St. George's Hospital.
Dickie, William Stewart, Glasgow.
Dunston, Bernard Mainwaring, St. Thomas's Hospital.
Duprey, George Perry, Middlesex Hospital.
Eddowes, William Black, St. Paul's School, West Kensington.
Forshaw, William Herbert, Firth College, Sheffield.
Foulds, Matthias Frederick, Owens College, Manchester.
Harris, Thomas Arthur Ball, Firth College, Sheffield.
Hogg, Ernest Henry, Middlesex Hospital.
Hogg, William John, Queen's College, Belfast.
Holland, Edward Torriano, St. Thomas's Hospital.
Johnston, Lambert Arthur Wellesley, Mason College, Birmingham.
Jones, David Morgan, Glasgow.
Jones, William Forsyth, Charing-cross Hospital.
Joyce, William Marmion, Dublin.
Ker, William Percival, Guy's Hospital.
Langworthy, Edward, St. Bartholomew's Hospital.
Levick, George Murray, University College, London.
Mathews, William L'Estrange, Mason College, Birmingham.
Mays, Charles Cecil Wildman, Firth College, Sheffield.
Morrison, Harold, Yorkshire College, Leeds.
Murray, Albert William, St. Mary's Hospital.
Navarra, Norman, Middlesex Hospital.
Newton, Arthur Charles Duncan, University College, London.
Parrott, John Norman, St. Mary's Hospital.
Rahim, Backshi Isaac, King's College Hospital.
Rashleigh, Hugh George, Guy's Hospital
Reynald, Reginald, University College, Bristol.
Roberts, George Rowland, St. Thomas's Hospital.
Rutherfoord, Thomas Corrie, St. Paul's School, West Kensington.
Sandiland, Digby Sayer, St. Bartholomew's Hospital.
Shattock, Charles Robert, King's College Hospital.
Shelton-Jones, Ernest, Guy's Hospital.
Skey, John Evan, Westminster Hospital.
Smith, Francis Maylett, St. Mary's Hospital.
Symons, Vivian Hood, Mason College, Birmingham.
Thompson, Reginald, St. Bartholomew's Hospital.
Tobit, Perry Praime, King's College Hospital.
Walton, George Francis, St. George's Hospital.
Ward, Bernard Joseph, Mason College, Birmingham.
Ward, Joseph, Firth College, Sheffield.
Whatley, James Lawson, Guy's Hospital.
Wood, Frederick Joseph, St. Bartholomew's Hospital.
Yule, Bransby, University College, London.

UNIVERSITY OF LONDON.—The following candidates passed the Preliminary Scientific (M.B.) Examination in July, 1896:—

A.—PASS LIST.

Entire Examination.

First Division.—Compton Henry Auchmuty, Westminster Hospital; Thomas Paul Baldwin, private tuition; Ernest Gilbert Bark,* King Edward School, Birmingham, and Mason College; Dora Elizabeth L. Bunting,* University College; Ernest Langsford Clay,* King Edward High School, Birmingham, and Mason College; William Thomson Crawford, High School and University College, Nottingham; Thomas Henry Bourne Dobson, Owens College; William Percy Gowland, Owens College; Henry Francis Hatfield, Guy's Hospital; William Algernon Louis Holland, King Edward High School, Birmingham, and Mason College; Margaret Hudson, B.A., University Tutorial College; John Frederick Jennings, University College, Cardiff, and University Tutorial College; Alfred Ernest Jones, University College, Cardiff; Harold Lawton,* Epsom College; Charles Alfred Marsh, London Hospital; William Wilson Nock, Mason College; Philip Rees, B.A., University Tutorial College and private study; Harold Edward Ridewood,* London Hospital; John Webster, Mason College; Frederick Norman White, St. Bartholomew's Hospital; and Ernest Wragg,* Nottingham High School.

Second Division.—Samuel Herbert Lee Abbott, University of Oxford; Austin Lewis Badcock, Epsom College; Ruth Balmer Westbed College; Thomas Ramsey Beatty, B.A., private study and University Tutorial College; William Henry Bowen, King Edward's High School, Birmingham, and Mason College; Sidney Herbert Bown, University College; Sidney Bree, University College; Henry Martyn Brown, St. Mary's Hospital; Kate Alice Burke, University Tutorial College and private study; Janet Mary Campbell, University Tutorial College; Frank Challans, London Hospital; Sydney William Cole, St. Olave's Grammar School, Southwark; William James Davies, Guy's Hospital; Charles Noel Davis, Guy's Hospital and private study; Arthur Eastwood,* Owens College; David Ellis, University College, Aberystwith; Hubert Powell Evans, University College, Aberystwith; Walter Fedde Fedden, University Tutorial College and St. George's Hospital; Edward Fow Fisher, Epsom College; George Gordon Fraser, B.A., private study and Forest School Laboratory; Harold Pace Gibb, St. Paul's School; Philip Anthony Mark Green, London Hospital; Percy M. Greenwood, B.A., Borough-road New College and University Tutorial College; Oskar Cameron Gruner, Owens College; Bernard Hart,* University College; Helena Gertrude Jones, Bedford College, London, and University Tutorial College; William Henry Jones, University College, Aberystwith; Ernest William Julius Ladell, St. Bartholomew's Hospital; James Littleton Lawry,* Plymouth Technical Schools; Edward Likiernik, private study; Robert Archer Lloyd, St. Bartholomew's Hospital; Herbert Love, St. Bartholomew's Hospital; Ernest Robert Marle,* King Edward's School, Birmingham, and Mason College; George Lawrence Lacy Mayo, University College, Bristol; Mabel Halden Naylor, Hull Municipal Technical School and private study; Alfred Ernest Osborne, B.A., Firth College and private study; Charles Seymour Parker, University College; Marie Louise Pethick, Ladies' College, Cheltenham; Herbert Martin Ruddock, B.A., University Tutorial College; Ellen Mary Sharp, University College; Harold Weightman Sinclair, University College and private tuition; Herbert James Slade,* University College, Bristol; John Elliott Sparks, University College, Bristol; Louis Edward Stamm, B.A., Guy's Hospital; Claude Tessier, Guy's Hospital; George William Watson,* Yorkshire College; Robert James Waugh, University Tutorial College; Winefred F. Wigglesworth, Owens College; Arthur Gordon Wilson, Owens College; Edith Louisa Young,* Bedford College, London; and Ernest Eric Young, St. Bartholomew's Hospital.

Honours Candidates recommended for a Pass.

Hugh Robert W. Thomson, Epsom College; and Joseph Wm. Lewis Windridge,* Mason College and private study.

Chemistry and Experimental Physics.

Fred Bullough, Owens College; Mildred Mabel Burgess, University Tutorial College; Victor Albert Châtelain,† University Tutorial College and Guy's Hospital; Brynmor Chiles-Evans, University College, Aberystwith and Cardiff; Edward Murray Clarke, University College, Cardiff; George Thomas Collins, Guy's Hospital; Michael Alsly Collins, Guy's Hospital; Leonard Charles Comfort, Clifton Laboratory; James Frederick Corson, Owens College; Ernest Nicholson Cunliffe, Monmouth Grammar School; Harold John De Brent, St. Thomas's Hospital; Robert Valentine Dolbey Dulwich College; Thomas Lambert Drapes, Epsom College; Thomas Scarborough Dudding, Oundle School; Albert Davies Edwards, University College, Cardiff; John Parker Ellerington, Carlyon College and private tuition; Herbert Harry Emmerson, Wesley and Firth Colleges; Daniel Cyril Evans,† University College, Cardiff, and private study; John Evans, University College, Aberystwith; Sidney Fawdyke, private study and University College, Cardiff; John Sydenham Furnivall, Epsom College; Arthur Claypon Horner Gray, Guy's Hospital and Malvern College; Charles Montague Heanley, St. George's Hospital; Charles Alwin Heywattana, University College; Archibald Edward Hills, University Tutorial College; Lionel Gordon Hopkins,† University College, Aberystwith and St. Thomas's Hospital; David Morgan Hughes, University College, Cardiff; Margaret Ethel Hutchinson,† private tuition and University Tutorial College; Henry Michael Joseph, Central Foundation School and People's Palace; Henry Crewe Keaves, Guy's Hospital; Norman Macfadyen, University Tutorial College; Ernest Charles Mackay,† St. Bartholomew's Hospital; George Bartley McKean, Queen's College, Belfast, and private study; Ernest Thomas Frederick Malan, private study; Greer Edmund Malcolmson, Owens College; Edward Lister Martin, University Tutorial College; Frank Herbert Noke, Bedford Modern School; Francis William Oldfield, Nottingham High School; William Gibson Parker, Guy's Hospital; Arthur Frederick Pilkington,† St. Mary's Hospital; Francis Baldwin Pinniger, private study; Charles Roper, Gonville and Caius College, Cambridge; Philip Savill,† University College, University Institute, and University Tutorial College; John Kendall Syms,† University College and private tuition; Frank Leslie Thomas, Guy's Hospital; Edward Newbury Thornton, Cheltenham College; George Stafford Ward,† London Hospital; and John Harry Watson, private study and tuition.

Biology.

Frederick Hugh Alexander, University College; Sidney Marshall Banham,† University College; Hugh Barber, Owens College; Victoria Evelyn M. Bennett, University College, Cardiff; Julius Meyer Bernstein,† Owens College; Francis Joseph Birks,† Firth College and private study; Alwyn Hewett Bradley, Mason College; Herbert William Brown,† Guy's Hospital and University Tutorial College; William Wellesley Campbell, King's College; Norman Carpmael,† Dulwich and University Colleges; Geoffrey Clarke,† Owens College; Olive Claydon, Owens College; Oswald Joseph S. Damian,† St. George's Hospital; Edgar Winn Fox Dolman, Epsom College; Edith Dunnington, University College; Frederic Augustus Edmonds, Epsom and University Colleges; Julian Craig Fleming, University College; Frederick Goulburn Gibson,† Guy's Hospital; Anne Elizabeth Hooper, Westfield College; Andrew Ferguson Horn, University College; Frances Mary Jenkin, Westfield College; Hugh Llewellyn Jenkins, Owens College and private study; John Jenkins, University College, Cardiff; Ernest Arthur Jenkinson, Nottingham High School; Lionel Capper Johnson, Owens College; Ernest Thomas Kendon, Guy's Hospital; Alfred Dudley E. Kennard,† Guy's Hospital and Carlyon College; William Ronald Kirkness,† King's College; Reinhold Frederic Korte, Craigmore and University Colleges; Charles Ernest Lakin, Wyggeston School; Frederick James Lawson,† University and University Tutorial Colleges; Austin Clement Le Rossignol, Victoria College, Jersey; George Herbert Hind Manfield,† Guy's Hospital; Newton Herbert Marshall, B.A., Baptist and University Colleges, Nottingham; Thomas Arnold Matthews,† Guy's Hospital and Carlyon College; Frederick James Alexander Mayes† University College; Mary Eva Hastings Morris, University College, Aberystwith; William John Morrish, St. Mary's Hospital and private study; Harold Rundle FitzNattle, University College; Marian Theresa Pool, University Tutorial College; Ireton George Pritchard, King's

College; Herbert Harland Raw, Kingswood School; Morgan James Rees,† Guy's Hospital and University Tutorial College; John Bart Rous, University College; Charles Russ, St. Mary's Hospital and University Tutorial College; Louis Charles Arthur Savatard,† Guy's Hospital; Agnes Catharine Scott, Yorkshire College; Charles Cecil Connock Shaw, St. Mary's Hospital; Henry Gates Sievwright, University College, Cardiff; Frederic Morton Vincent Smith,† Guy's Hospital; George Smith, B.A., Merchant Venturers' Technical College and private study; James Arthur Smyth, University College; Louisa Spicer, University College; Ethel Maud Stacy, University College; George Henry Stone, University College; Robert Archibald S. Sutherland, St. Bartholomew's Hospital; Albert Edward Thomas, St Bartholomew's Hospital; William Jones Thomas,† private study; David Herbert Trail,† Dulwich College and Guy's Hospital; Edith Eleanor Tucker,† University Tutorial College; Douglas Duke Turner,† Epsom College and St. Thomas's Hospital; William Bartholomew Valle, London Hospital; Arthur Beaumont Waller,† Alwyne Institute; Herbert Kingsley Ward, Mason College; Lucy Wellburn, University Tutorial College and London School of Medicine; Arthur Whitehead-Smith, Epsom College; Walter A. Landon Whitehouse, St. John's College, Balham, and Carlyon College; Alexander Wicksteed, University Tutorial College and Private study; and John Thomas Williams, University Tutorial College.

One Subject of the Examination (under former Regulations).

James Cameron (*Physics*).‡ Heriot-Watt Laboratory and University of Edinburgh.

* These candidates have also passed in the Mathematics of the Intermediate Examination in Science and have thus become admissible to the B.Sc. Examination.

† These candidates have now completed the examination.

B.—EXAMINATIONS FOR HONOURS.

Intermediate Science and Preliminary Scientific (M.B.) conjointly.

Inorganic Chemistry.—First Class: Reginald C. Elmslie,* Preliminary Scientific, St. Bartholomew's Hospital; H. Leonard Heathcote, Intermediate Science, Municipal Technical School and Mason College, Birmingham; Albert Joseph James, Intermediate Science (disqualified by age for the Exhibition), University College, Liverpool, and private tuition and study; and William C. Reynolds, Intermediate Science, Royal College of Science. Second Class: F. Bernard Barrett,* Preliminary Scientific, Mason College; Alfred Edward Case,* Preliminary Scientific, Mason College; and Alfred B. Lindsey, Intermediate Science, University College and St. Thomas's Hospital. Third Class: Robert Crostnwaite, Intermediate Science, private study; F. Eustace King, Intermediate Science, Dulwich College; Alice Mabel Raisin, Intermediate Science, Bedford College, London; and Charles Alfred Wicks, Intermediate Science, The Leys, Cambridge.

Experimental Physics.—First Class: Sydney G. Mostyn,* Preliminary Scientific (disqualified by age for Neil Arnott Exhibition and medal), St. Bartholomew's Hospital; and Samuel S. Richardson, Intermediate Science (disqualified by age for Neil Arnott Exhibition and medal), private study and Royal College of Science. Second Class: F. John Cleminson, Preliminary Scientific, Kingswood School; C. K. Falkenstein, Intermediate Science, Finsbury and Central Technical Colleges, University Tutorial College, and private study; Henry Robinson, Intermediate Science, St. Paul's School; Charles N. Sears, Preliminary Scientific, Wilson's Grammar School, Camberwell; Maurice Solomon, Intermediate Science, Central Technical College and Birkbeck Institute; Michael E. White, Intermediate Science, University College, Aberystwith; and O. Thomas Williams,* Preliminary Scientific, University College, Liverpool. Third Class: Jack L. Capes, Intermediate Science, University College; Herbert Ernest Corlan, Intermediate Science, Hartley Institution and private study; John Allden Lloyd,* Preliminary Scientific, St. Bartholomew's Hospital; and Allan Macdiarmid, Intermediate Science, University College and private study.

Zoology.—First Class: Charles J. Singer, Intermediate Science (Exhibition), University College. Second Class: Katherine Chamberlain, Preliminary Scientific, University College; Charles R. Cross, Preliminary Scientific, Royal College of Science and Yorkshire College; Lucian A. De Zilwa, Intermediate Science, University College and private study; and Alfred B. Lindsey, Intermediate Science, University College and St. Thomas's Hospital. Third Class: Thomas T. Blythe, Intermediate Science, University Tutorial College; Bessie M. Gilford,* Preliminary Scientific, University College; William Henry Harwood Yarred, Preliminary Scientific, Dulwich and University Tutorial Colleges; and Winifred Thorp, Preliminary Scientific, University College.

* These candidates have also passed in the mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. Examination.

The following candidates passed the Intermediate Examination in Medicine in July, 1896:—

A.—PASS LIST.

Entire Examination.

First Division.—William Billington, Mason College; Naline Heloïse Bonnerjee, London School of Medicine for Women; Harriett M. Castlevine, B.A., London School of Medicine for Women; Russell John Howard, London Hospital; William Haliburton McMullen, King's College; Edith Nedd, Edinburgh and London Schools of Medicine; Frederick Garrett Peck, St. George's Hospital; Miles Harris Phillips, University College, Bristol; Charles Grant Pugh, B.Sc., Middlesex Hospital; Russell Henry Jocelyn Swan, Guy's Hospital; Frederick George Thomson, Cambridge University and Middlesex Hospital; and William Howard Unwin, Charing-cross Hospital.

Second Division.—Joseph Thomas Auld, Owens College; Arthur Stanley Barnes, B.Sc., Mason College; Frank Barnes, Mason College; Harold Shuttleworth Barwell, St. George's Hospital; James William Huxtable Bendle, St. Mary's Hospital; Arthur Bevan, St. Thomas's Hospital; David Anthony Birrell, St. Mary's Hospital; Charles Thompson Bishop, Charing-cross Hospital; Elizabeth Honor Bone, London School of Medicine for Women; Harry Ellis Brawn, Mason College; Francis William Brook, Guy's Hospital; Charles William Buckley, St. Mary's Hospital; Lucy Beatrice Clapham, London School of Medicine and Bedford College; Arthur Ernest Clarke, Guy's Hospital; James Alfred Patrick Cullen, London Hospital; Robert Halstead Dixon, St. Mary's Hospital; Harry Dunk, Yorkshire College; John Thomas Dunston, Guy's Hospital; Agnes Sarah Edmonds, B.A., London School of Medicine for Women; Ernest William Floyd, Owens College; Ernest Faber Fookes, Owens College; Alexander Stoker Gardiner, St. Mary's Hospital; Arthur Stanley Green, Royal College of Surgeons in Ireland and Trinity College, Dublin; William Layard Griffiths, B.Sc., University College; Alfred Holroyde, Yorkshire College; Arthur Webb Jones, St. Thomas's Hospital; Alexander John Knowlton, Middlesex Hospital; Ernest Lewis Lilley, Charing-cross Hospital; Beatrice Frederica Lovibond, London School of Medicine for Women; John Matthews, Guy's Hospital; Alfred Goldthorpe Osborn, Guy's Hospital; Thomas Perrin, St. Thomas's Hospital; Arthur George Grant Plumley, Guy's Hospital; William Barrington Prowse, University College, Bristol, and Clifton Laboratory; Adeline Mary Roberts, London School of Medicine for Women; Kitie Sayer, London School of Medicine and Pharmaceutical Institute; Henry James Taylor, Owens College; Jane Holland Turnbull, London School of Medicine for Women; and Frank Douglas Turner, Guy's Hospital.

Excluding Physiology.

First Division.—Thomas Aubrey, University College, Bristol; Frank Butterfield, Owens College; Guy Hemming Coltart, Westminster Hospital; Theodore Maries-Thomas, University College; Arthur Ricketts, University College; Sydney Richard Scott, St. Bartholomew's Hospital; and Lewis Augustus Walker, St. Bartholomew's Hospital.

Second Division.—Arthur Hunton Carter, Guy's Hospital; Mabel Eliza Cousins, London School of Medicine for Women; William John Edwin Davies, St. Thomas's Hospital; Alec Densham, Guy's Hospital; Francis Ley Augustus Greaves, St. Thomas's Hospital; Henry William Harding, St. Thomas's Hospital; Elizabeth Knight, London School of Medicine for Women; Edgar Leach, Owens College; Marion Bessie Mathieson, London School of Medicine for Women; Herbert Henry Mills, Westminster Hospital; John Austin O'Dowd, Mason College; and Walter Bernard Secretan, Guy's Hospital.

Physiology only.

Second Division.—Sydney Oliphant Bingham, St. Thomas's Hospital; Herbert Hilton Cheesman, Westminster Hospital; Arthur Bernard Cridland, University College, Bristol; William Henry Singer Liddell, St. Mary's Hospital; Alfred John Martineau, St. Thomas's Hospital; James Herbert Rhodes, St. Bartholomew's Hospital; Geo. Maurice Oswald Richards, Owens College; John Elliott Robinson, St. Bartholomew's Hospital; Penry William Rowland, St. Bartholomew's Hospital; Claude Rundle, St. Mary's Hospital; Daniel Lloyd Smith, Guy's Hospital; Sidney Robert Smith, Westminster Hospital; George Padgett Tayler, St. Bartholomew's Hospital; Isaac Taylor, Yorkshire College; and Lorenzo Whitfield, Mason College.

B—EXAMINATION FOR HONOURS.

Anatomy.—First Class: Herbert Sherwell Clogg (exhibition and a gold medal) University College, Cardiff. Second Class: Caleb Thomas Hilton, Guy's Hospital. Third Class: Henry Peet, Yorkshire College.

Physiology and Histology.—First Class: Caleb Thomas Hilton, Guy's Hospital. Second Class: Frank Sherwill Dawe, St. Mary's Hospital; and Raghavendra Row, Grant Medical College, Bombay, and University College Third Class: Charles Jas. Thomas, B.Sc., University College, Cardiff.

Organic Chemistry.—First Class: James Gaff (exhibition and gold medal), St. Thomas's Hospital. Second Class: Caleb Thomas Hilton, Guy's Hospital; Mary Muriel Griffin Iles, London School of Medicine and Birkbeck Institute; and Donald John Munro, Guy's Hospital.

Materia Medica and Pharmaceutical Chemistry.—First Class: Caleb Thomas Hilton (Exhibition and Gold Medal), Guy's Hospital; Henry Peet, Yorkshire College; and Mabel Geraldine Stevenson, London School of Medicine for Women. Second Class: Alexander Brown, King's College; and John Fletcher Porter, London School of Anatomy and London Hospital. Third Class: Arthur Edwin Horn, St. Mary's Hospital; Richard Rothwell Mowll, King's College; Mabel Paine, London School of Medicine for Women; and Cuthbert Allan Sprawson, King's College.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Karl Mellinger and Dr. Friederich Hosch have been promoted to extraordinary professorships of Ophthalmology.—*Breslau:* Dr. W. Uhlhoff of Marburg has been appointed to the chair of Ophthalmology in succession to Professor Förster, resigned.—*Chicago (Rush Medical College):* Dr. Edwin Klebs has been appointed Professor of Pathology.—*Cracow:* Dr. L. Reiss has been recognised as *privat-docent* in Dermatology and Syphiligraphy, and Dr. A. Baurowicz as *privat-docent* in Laryngology.—*Geneva:* Dr. R. de Seigneux has been recognised as *privat-docent* in Midwifery and Gynæcology.—*Halle:* Dr. P. Jensen, a son of the poet Wilhelm Jensen, has been recognised as *privat-docent* in Physiology.—*Heidelberg:* Dr. Cramer has been appointed Extraordinary Professor of Hygiene and Dr. Gottlieb Extraordinary Professor of Pharmacology.—*Lausanne:* Dr. A. Dufour has been recognised as *privat-docent* in Ophthalmology.—*St Petersburg (Military Medico-Chirurgical Academy):* Dr. S. Botkin has been appointed Professor with Charge of the New Clinic for Infectious Diseases.—*Strasburg:* Dr. Hofmeister of Prague has been appointed to succeed the late Dr. Hoppe-Seyler in the chair of Physiological Chemistry.—*Vienna:* Dr. F. Schlagenhaufer has

been appointed Prosector to the Imperial Hospitals in the capital.—*Western Reserve University (Cleveland Medical Department)*: Dr. Cushing and Dr. Hoover have been appointed Professors of Pediatrics and Physical Diagnosis respectively.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Close of the Session.

MEMBERS of Parliament were released from attendance at Westminster on Friday, Aug. 14th, after a session of a little over six months. It is not expected that they will be called upon again until early in January of next year.

Poor-law Officers' Superannuation Bill.

This Bill, introduced early in the session by a private member, stood in great jeopardy of being lost, but at the eleventh hour all opposition to it was conciliated. On the day before the House rose it obtained a third reading in the House of Commons and was immediately carried up to the House of Lords, where on the following day it was in quick succession read a second time, passed through committee, and read a third time, and together with a number of other Bills received the Royal Assent immediately before the prorogation.

Bad Smells in the House of Commons.

On the last day of the session Mr. Giles addressed an inquiry to the First Commissioner of Works on a matter which had given members a good deal of concern—namely, the unpleasant and unwholesome smells that frequently occur in the neighbourhood known as the Bar of the House.—Mr. Akers Douglas said he had satisfied himself by personal inspection and investigation that they do not proceed from drains but from the passage of objectionable cargoes on the river. The air artificially introduced into the Chamber comes directly from the neighbourhood of the river.

HOUSE OF COMMONS.

THURSDAY, AUG. 13TH.

Schools and Epidemics.

Mr. Talbot asked the President of the Local Government Board whether he would consider the propriety of instructing the medical officer of health, in cases where an elementary school had been closed by authority on account of prevalence of infectious disease, to visit such schools and satisfy himself that the danger of infection was passed before the schools were re-opened.—Mr. T. W. Russell, replying for Mr. Chaplin, said that in cases in which an elementary school had been closed by the district council, acting under the Education Code, on the advice of the medical officer of health, it was his duty, whenever he deemed such action necessary, to cause the premises to be disinfected or cleansed; but when this had been done, a visit to a school which was closed would not add to his information. Before the expiration of the specified period for which a school had been closed the duty of advising the district council whether the circumstances called for any further restrictions on school attendance already devolved on the medical officer of health, and the Board considered that he should make such inquiries as would enable him to advise in the matter.

Mr. W. R. Greene addressed a question to the Vice-President of the Committee of the Council on Education with regard to the loss to the school funds occasioned by the outbreaks of disease, and asking whether he would take into favourable consideration the assimilating of the method of calculating the average attendance for the fee grant to the method on which the full annual grant was calculated.—Mr. Ernest Gray pointed out to the Vice-President that managers of schools were deterred from closing them when, perhaps, they ought to be closed by the loss of money it would involve.—Sir John Gorst replied that legislation would be necessary to assimilate the methods of calculating average attendance for the purposes of the annual and fee grants. A clause having this object was put into the late Education Bill.

The River Nuisance in East London.

Mr. T. W. Russell said, in answer to a question, that the Local Government Board received last month a petition signed by seventy-four ratepayers in West Ham, in which they complained of the condition of the Channelsea River, the waters of which are tidal, and stated that the river was practically an open sewer. The Board were in communication with the Lea Conservancy Board on the subject and had forwarded to them a copy of the petition. The Board were desirous of rendering any assistance that was possible in the matter, but it was not a case in which they had any compulsory powers that could be exercised.

Health of the Indian Troops in Egypt.

Lord George Hamilton, replying to a question on this subject put by Sir William Wedderburn, said that a battalion of native infantry and a squadron of native cavalry had been sent to Tokar, not as a guard for the convict prison, but to garrison that port, as the position was one of great strategical importance for the defence of the Suakin district, as was shown by the fighting in the vicinity in 1885. The climate was very hot, but the health of the troops and followers at Suakin and Tokar was reported to be very good, and that of the European officers generally good; but out of seventy officers at Suakin and Tokar four had been invalided, including the officer in command at Tokar. There was a sufficient supply of water at Tokar and the food-supplies were ample. Every precaution was being taken to make the condition of the troops holding this important position as comfortable as was possible.

Venereal Disease in India.

General Sir Henry Havelock-Allan asked the Secretary of State for India whether his attention had been called to the state of the British army in India, as reported by the *Times'* correspondent at Calcutta in its issue of the 11th inst., wherein it was stated that nearly 4000 men were in hospital from preventable contagious diseases, and that the state of the army was getting worse day by day; whether the attention of her Majesty's Government was to be seriously drawn to this matter during the coming recess; and whether he was now prepared to state to the House that during the coming recess, in conjunction with Lord Lansdowne and the Governor-General of India, steps would be taken for an inquiry, either by Royal Commission or by Select Committee of this House, with a view to taking measures that might, once for all, as regards this painful matter, place the British army in India in that state of efficiency in which the people of this country and of India desired to see it, and to bring about which they paid some twenty-five millions of money every year.—Mr. James Stuart asked the Secretary of State whether his attention had been called to the various memoranda of the Army Sanitary Commission and to the following conclusions which they state: "The facts, so far as we can ascertain them, lead us to the conclusion that a compulsory lock hospital system in India has proved a failure, and that its re-institution cannot consequently be advocated on sanitary grounds. We believe that the best practicable means of diminishing the prevalence of these diseases is to be found in establishing a system of voluntary lock hospitals and in providing the soldier, as far as possible, with healthy occupation and recreation"; and whether any steps had been recently taken to bring these views before the cantonment authorities or to carry them into effect.—Lord George Hamilton replied that he had seen the statement in the *Times*. As stated on Friday by the First Lord of the Treasury, the Government would consider the propriety of some inquiry to decide whether the alleged increase of disease was correct. As to the other question, he might inform the hon. member (Mr. Stuart) that he was quite aware of the opinions recorded by the Army Sanitary Commission on the subject to which he referred, but what he wanted to ascertain was not the opinion of any individuals, however eminent, but the actual facts of the case.

General Sir Henry Havelock-Allan asked whether the Government proposed to institute an inquiry by Royal Commission or committee of this House.—Lord George Hamilton said he should not like to pledge himself to the exact form of the inquiry. He did not think it would be necessary to have recourse to either of these forms. What he thought was really required was a small number of impartial persons to go into the facts and see whether or not the statement about the increase of disease was correct. He understood the statement was disputed.

Small-pox in Gloucester.

Mr. T. W. Russell said, in reply to Mr. Monk, that in Gloucester during the thirty completed weeks in 1896, from Jan. 4th to July 25th, the total number of cases of small-pox notified was 2008. He was glad to say that during the two completed weeks ending respectively Aug. 1st and Aug. 8th no small-pox cases had been notified.

FRIDAY, AUG. 14TH.

Children's Department for the Local Government Board.

Mr. T. W. Russell said, in reply to a question, that the President of the Local Government Board had received a memorial with 131 signatures advocating the establishment of a Children's Department under the Local Government Board. The matter was receiving the attention of the President.

Water in Butter.

Mr. Oswald addressed a question to the Local Government Board on this subject, suggesting that in view of the difficulty with regard to a standard and the proposal of the Select Committee on Food Products Adulteration for the establishment of a court of reference, the Board should issue circulars giving directions to local authorities to suspend further prosecutions with regard to water in butter not fraudulently added, until the question of the standard had been definitely settled by Parliament.—Mr. T. W. Russell replied that the President of the Local Government Board had not yet been able to consider the report of the Select Committee, but he hoped to do so during the recess. Pending that consideration he could not issue such a circular as the hon. member required.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAM, J. L., M.B., C.M.Aberd., has been re-appointed an Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

ADAMSON, JAMES, M.D. Glasg., L.R.C.S.Edin., has been re-appointed Medical Officer to the Hetton-le-Hole Sanitary District of the Houghton-le-Spring Union.

ATKINSON, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Knaresborough Union, vice A. O. Wiley.

BURBIDGE, J. W., L.R.C.P., L.R.C.S. Edin., has been re-appointed an Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

CLAYTON, T. M., M.B., B.S. Durh., has been appointed Medical Officer by the Felling Urban District Council.

COLEMAN, M. O., M.D. Aberd., M.R.C.S., D.P.H. Eng., has been re-appointed Medical Officer of Health by the Surbiton Urban District Council.

CROSSKEY, W. F., M.D., C.M. Glasg., has been re-appointed an Honorary Consulting Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

DAVIES, HOWARD, M.R.C.S., has been appointed Medical Officer by the Pontypridd Urban District Council.

DOW, W. A., M.D., B.S. Durh., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed an Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

EVANS, E. P., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health for the Mountain Ash Urban Sanitary District.

FAWSSETT, F., M.B., B.S. Lond., L.R.C.P., M.R.C.S., has been re-appointed an Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

FRENCH, D. M., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Mendlesham Sanitary District of the Hartismere Union.

GARLAND, EDWARD, M.R.C.S., L.R.C.P. Edin., L.S.A., has been re-appointed Medical Officer of Health for the Borough of Yeovil.

GIBBON, F. W., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Tyne Dock and West Harton Sanitary District of the South Shields Union.

GIDDY, CHARLES F., M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Scarborough Hospital and Dispensary.

HALL, F. A., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

LAING, JAMES G., L.K.Q.C.P. Irel., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Lathom and Burscough Urban Sanitary District.

LEE, JAMES, M.B., C.M. Edin., has been appointed Junior House Surgeon to the District Hospital, West Bromwich.

LEIGH, ARTHUR, M.B., Ch.B. Owens Coll., has been appointed Medical Officer for the Witton Sanitary District of the Blackburn Union.

LYS, GEORGE, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Almer Sanitary District of the Wimborne and Cranborne Union.

MACKENZIE, A. G., F.R.C.S., M.R.C.P. Edin., has been re-appointed Medical Officer for the Third Sanitary District of the Church Stretton Union.

MARTIN, T. M., M.B., C.M. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer, Lochwinnoch.

PEARCE, J. P., M.R.C.S., has been re-appointed an Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

PESKETT, A. F., M.R.C.S., has been re-appointed Medical Officer of Health for the Leyton Urban Sanitary District.

PRIDIE, J. F., M.B., C.M. Edin., has been appointed Medical Officer for the Chingford Sanitary District of the Epping Union.

PRIOR, J. R., M.B. Durh., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the Seamen's (late *Dreadnought*) Branch Hospital, Royal Albert Docks, E., vice A. Shillitoe, resigned.

PRIOR, SAMUEL, M.B. and C.M. Glasg., has been appointed Assistant Medical Officer at the Barony Parish Asylum, Woodilee, Lenzie, vice J. Barr Stevens, resigned.

REES, D. C., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Seamen's (late *Dreadnought*) Branch Hospital, Royal Albert Docks, E., vice J. Rust, resigned.

SADLER, M. T., M.D. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Worsborough Urban Sanitary District.

SMITH, WILLIAM R., M.D., B.S. Lond., F.R.C.S. Eng., has been appointed House Surgeon, Nottingham General Hospital.

SMYTHE, L., M.D. Glasg., F.R.C.S. Eng., has been re-appointed an Honorary Consulting Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

STEWART, WILLIAM, M.B., C.M., D.P.H. Glasg., has been appointed Medical Officer of Health for the Burgh of Gourock, vice A. Peacock, resigned.

STOBO, JAS., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Sunderland Urban Council.

SWAINSON, J. M. G., L.R.C.P., M.R.C.S., has been appointed Resident Obstetric Assistant to the Westminster Hospital.

THOMAS, WILLIAM EVANS, M.D., C.M. Edin., has been appointed Medical Officer to the Pentre and Ystrad Rhondda Division of the Pontypridd Union.

WARBURTON, E. S., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator to the Upper Ystradyfodwg District of the Pontypridd Union, vice J. R. James, deceased.

WATTS, BRIAN, M.D. Brux., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed a Resident Medical Officer at the Sheffield General Infirmary.

WELLS, T. P. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the First Sanitary District and for the Workhouse of the St. Alban's Union.

WHITEHALL-COOKE, CECIL, M.D. Lond., M.R.C.S., L.R.C.P., has been appointed Divisional Surgeon to the Metropolitan Police at Willesden Green.

WILLIS, J. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the Borough of Ilkeston.

WILSON, J. M., M.D. Glasg., D.P.H. Camb., has been re-appointed Medical Officer of Health by the Tickhill Urban District Council.

WILLIAMS, R. T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the Porthcawl Urban Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, London.—House Surgeon for six months. Board, lodging, lights, and fuel provided.

BOOTLE BOROUGH HOSPITAL, Derby-road, Bootle.—Senior House Surgeon. Salary £80 per annum, with board, washing, lodging, &c.

BRADFORD UNION WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £100 per annum, with prescribed rations, washing, and apartments in the Workhouse. Applications to the Clerk to the Guardians, 22, Manor-row, Bradford, Yorkshire.

CITY OF DUBLIN HOSPITAL, Upper Baggot-street, Dublin.—Visiting Surgeon.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Clinical Assistant for six months. An honorarium of £10, on certain conditions, given, and board, residence, and washing provided.

ESSEX AND COLCHESTER HOSPITAL, Colchester.—House Surgeon. Salary £100 per annum, with board and lodging in the hospital.

FINSBURY DISPENSARY, Brewer-street, Goswell-road, E.C.—Resident Medical Officer for one year. Salary £100 per annum, with a furnished residence in the institution, attendance, coals, and gas.

GENERAL INFIRMARY AND DISPENSARY, Doncaster.—In-door Dispenser and Assistant to House Surgeon. Board, lodging, and washing provided.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury, Manchester.—Junior Resident Medical Officer for one year. Salary £80 per annum, with board and lodging.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—House Surgeon. Salary £80 per annum, with apartments and board.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House Surgeon. Honorarium at the rate of £50 per annum and board.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician and Assistant House Surgeon. All tenable for six months. House Physician and House Surgeon will each receive a salary at the rate of £40 a year. The Assistant House Physician and Assistant House Surgeon will each receive a salary at the rate of £20 a year.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the North-Eastern Fever Hospital, St. Ann's-road, N., unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Chief Offices, Norfolk-street, Strand, W.C.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer, unmarried, at the Workhouse Infirmary, Fair Vale, Sheffield, for six months. Furnished apartments, board, and washing provided in the Infirmary. Applications to the Clerk to the Guardians, Union Offices, West Bar, Sheffield.

TOWER HAMLETS DISPENSARY, Stepney, E.—Resident Medical Officer. Salary £120 per annum, furnished rooms, coals, gas, and attendance. Applications to Dr. Donkin, 108, Harley-street, London, W.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Physician for twelve months. Honorarium £50 per annum, with board and lodging in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

EVANS.—On Aug. 13th, at Thurlow-road, Hampstead, N.W., the wife of W. Norman Evans, M.R.C.S., L.R.C.P. Lond., of a daughter.

FISON.—On Aug. 18th, at Criffell-avenue, Streatham-hill, the wife of E. T. Fison, M.B. Cantab., of a daughter.

HOLDEN.—On Aug. 18th, at Sudbury, Suffolk, the wife of J. Sinclair Holden, of a daughter.

JOLLYE.—On Aug. 10th, at Acre-lane, Brixton, S.W., the wife of A. Dixon Jollye, M.R.C.S., &c., of a son.

MARRIAGES.

ARMIT—POHL.—On Aug. 15th, at Godesberg, by Pastor Dr. Winter, Henry William Armit, M.R.C.S., L.R.C.P. Eng., younger son of William Armit, of 47, Wetherby-mansions, S.W., to Josephine Maria Gertrud, elder daughter of the late Herrn Sanitätsrath, Dr. Pohl of Godesberg, Germany.

CENTER—MILNE.—On Aug. 18th, at St. James's Church, Aberdeen, Surgeon-Colonel W. F. Center, I.M.S., to J. Lillie Milne, daughter of the late Charles Milne, of Longside.

GOUGH—PHILLIPS.—On Aug. 14th, at Emmanuel Church, Compton Gifford, Plymouth, by the Rev. Preb. Hayne, Vicar of Buckland Monachorum, Yelverton, assisted by the Rev. E. J. Windsor (late Vicar of Horrabridge), John Harley Gough, M.R.C.S. Eng., L.R.C.P. Lond., of Harwood, Horrabridge, South Devon, eldest son of the late Henry Gough, of Manchester, to Mary Susan Phillips, only daughter of the late John Phillips, of Buckland Abbey, Yelverton, South Devon.

INGRAM—JACKSON.—On Aug. 15th, at St. Aloysius's, Folkstone, by the Rev. Father Dennan, Reginald Edward Tierney Ingram, eldest son of Colonel Ingram of Woolwich, to Ella Ogilvy Erskine, only child of Major-General Jackson of Kirkbuddo, Forfar, N.B., and Folkestone.

MILLER—REID.—On Aug. 13th, at Corstorphine Parish Church, N.B., by the Rev. Dr. Dodds, Arthur William Miller, M.B., C.M., Limehouse, E., to Isa Stuart Reid, youngest daughter of the late James Reid, Corsebank, Sanquhar.

RAWLINS—AUERBACH.—On Aug. 15th, at St. Augustine's, Queen's-gate, South Kensington, W. Peter Rawlins, M.D., of Gordon House, Highgate-road, to Johanna Maria, eldest daughter of Rudolph Auerbach, of West Hampstead.

DEATHS.

CARTER.—On June 14th, 1896, at Waotee, Lichfield, New Zealand, William Henry Carter, M.R.C.S., eldest son of the late William Carter, of Billericay, Essex, aged 62 years.

HOWES.—On Aug. 14th, at Peckham-rye, Gerald Sidney Owen Howes, L.R.C.P., M.R.C.S., aged 30 years.

WILLIAMS.—On Aug. 17th, at University College Hospital, Lewis Williams, M.D. Lond., M.B., B.S., eldest son of Lewis Evans Williams, of New Barnet, aged 28 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 20th, 1896.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Rainfall	Remarks at 8.30 A.M.
Aug. 14	29·92	WNW	64	62	110	73	61	....	Raining
,, 15	29·94	N.W.	59	56	118	70	53	0·05	Cloudy
,, 16	30·07	S.W.	60	57	118	74	52	....	Bright
,, 17	30·14	N.E.	57	53	113	73	53	....	Cloudy
,, 18	30·00	S.W.	58	57	91	63	56	0·11	Raining
,, 19	29·85	N.E.	59	55	107	71	55	0·07	Cloudy
,, 20	29·90	N.E.	60	57	98	67	55	0·14	Bright

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

The Index for the first half-yearly volume for 1896 was given in the issue of June 27th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, or post free 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

THE CONTENTS OF PRIVATE LIBRARIES.

To the Editors of THE LANCET.

SIRS,—The "List of Public Libraries of all Countries," compiled by Royal Librarian Richter, has been completed by me some time ago, and I now propose to follow it by a similar "List of Important Private Libraries." In order to be able to apply for particulars to the owners of private libraries it is first necessary for me to ascertain their names, and for this purpose to be favoured with kind assistance from many quarters. Would you perhaps have the great goodness to note for me the names and addresses of any of your acquaintance whose libraries you may estimate as exceeding 3000 volumes or smaller if devoted to some specialty.—I am, Sirs, yours faithfully,

Leipzig, Aug. 13th, 1896. G. HEDELER.

*** Mr. Hedeler's address is Nurnbergerstr. 13, Leipzig. If any of our readers possess a library, medical or general, of the size mentioned they may be doing present and future bibliographists a service by communicating with him.

"SPONTANEOUS RUPTURES OF THE HEART."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 18th are published the notes of a case of so-called spontaneous rupture of the heart by the pathologist of the Manchester Infirmary. As far as can be learned from the brief notes of the microscopical changes the case differs in no respect from the numerous cases previously recorded, and corresponds to the cases of rupture of the heart described in almost every text-book of medicine and pathology. Why describe such cases as *spontaneous* rupture? I am aware that the term spontaneous has been used by several writers to describe those cases of rupture which occur as the result of disease of the cardiac walls and which are not the result of external injury, and in this sense it was evidently used by the writer of the paper to which I refer. Cerebral hæmorrhage due to the rupture of a cerebral vessel is not *generally* described as spontaneous hæmorrhage, neither are hæmoptysis nor hæmatemesis when due to well-known pathological changes. It would certainly be less confusing, in describing these cases of cardiac rupture due to various forms of degeneration of the cardiac muscle and other well-recognised causes, to omit the adjective "spontaneous" altogether. I am, Sirs, yours faithfully,

Aug. 14th, 1896. X.

Tiverton.—We have no knowledge as to the identity of the persons mentioned.

ENGLISH-FRENCH DICTIONARIES.

To the Editors of THE LANCET.

SIRS,—If possible will you please kindly state in your next issue what is the best English-French and French-English dictionary at a moderate price, and containing modern scientific terms, idioms, &c.

I am, Sirs, yours faithfully,

South Bar, Banbury, Oxon., Aug. 12th, 1896. J. A. RAYE.

*** By far the best general dictionary of convenient size is Bellows' (John Bellows, Gloucester, or Trübner, London). For ordinary purposes Contanseau's French-English and English-French dictionary is convenient and reliable (Longmans, Paternoster-row, fourth edition, 1860, about 960 pp., price about 7*s.* or 8*s.*). French renderings of a great many English medical words will be found in the official Nomenclature of Diseases (Eyre and Spottiswoode, East Harding-street, E.C., 1895, price 1*s.*), the Illustrated Dictionary of Medicine and the Allied Sciences, by George M. Gould, M.D. (Baillière, Tindall, and Cox, King William-street, Charing-cross, 1894, pp. 1633), and the National Medical Dictionary, by John S. Billings, M.D. (Young J. Pentland, Edinburgh and London, 1890, two large vols., pp. 731 and 799). An English reader with a fair knowledge of chemistry and physics scarcely requires a special lexicon for the perusal of French books on these subjects, but some difficulty is likely to be encountered in reading popular treatises on botany or natural history, especially in the identification of birds and fishes. Mechanical and engineering terms will be found in the large English-French and French-English Technological Dictionaries edited by Röhrig, and in the similar English-French-German work by Tollhausen, both of which may be obtained either from Messrs. Williams and Norgate, Henrietta-street, Covent-garden, or Messrs. Kegan Paul and Co., Charing-cross-road. Another very useful book for many purposes is the French-English and English-French Naval and Military Technical Dictionary, by Lieut.-Colonel Burn (John Murray, Albemarle-street, third edition, 1854, pp. 700); there is also a convenient little book on Nautical Terms in English and French, by Leon Delbos (Williams and Norgate, Henrietta street, 1889, pp. 66). French idioms can be studied more profitably in grammars or phrase-books than in dictionaries. There are many books of that class; there is a useful one on Gallicisms and Anglicisms by Aigre de Charente (Hachette, King William-street, Charing cross, fourteenth edition, 1877).

THE POISONOUS ACTION OF MAGNESIUM SULPHATE.

To the Editors of THE LANCET.

SIRS,—The symptoms in Dr. Headley Neale's case of poisoning after one ounce of Epsom salts, published in THE LANCET of Aug. 15th, confirm the experiments of Dr. Matthew Hay regarding the poisonous action of this saline when injected intravenously. *Vide* "Medical Digest," Section 274:5. In the Appendix of the work referred to a case is noted by Mr. Lang that proved fatal after taking four ounces.

I am, Sirs, yours faithfully,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, Aug. 17th, 1896.

Victim.—The possessor of a genuine degree has a right to use it. American degrees fell into disfavour in England some time back because of the bogus degree-shops rife in the States, but these have now been largely suppressed.

Mr. I. P. Llewelyn.—Our correspondent has obviously given us a wrong reference.

A QUESTION OF FAIR-DEALING.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you would give the following publicity so that others may benefit by my experience. About the end of June I answered an advertisement for a partner, and after some correspondence was invited to meet the vendor. I gave him full particulars, and sent him a copy of testimonials with regard to myself previously, so that he might form an idea as to my status and capabilities. He asked me, as I say, after that to go over 200 miles to see him, which I could not do in one day, and then I found he did not require a partner until Christmas. He also holds the offices of coroner, public analyst, and medical officer of health, each of which he carefully keeps to himself, the partner having no share in them. If this is not a one-sided concern I do not know what such is.—Yours truly, FAIR-DEALING.

Aug. 12th, 1896.

*** We sympathise with our correspondent for having travelled 200 miles for nothing, but do not consider his evident annoyance with the advertiser reasonable. Any prudent man desiring a partner would begin to make his arrangements six months ahead, though it might have been stated in the advertisement or in the preliminary correspondence that a partner was not required before Christmas. Again, we presume that the fact that the public appointments were not to be brought into the partnership account influenced the price asked for the partnership. A man has a right to sell as much as he likes or as little, and the price asked should depend on what is for sale.—ED. L.

M.B. (Lond.) should read the late Dr. Hack Tuke's "Dictionary of Psychological Medicine" supplementary to Professor Sully's "Outlines of Psychology," or Professor Ladd's work of similar scope. He should also read Dr. Savage's manual on insanity.

A SIMPLE PILL COATER.

We have received from Mr. James Cocks, 8, Edgcumbe-street, Stonehouse, Plymouth, a description of an ingenious little appliance which he calls the Simplex Gelatin Pill Coater. The machine consists of a needle-studded disc, which is made to rapidly rotate by means of a train of toothed wheels. The pills are placed on the needles and immersed in a gelatin solution and rotated slightly. They are then withdrawn from the solution, rotated again briskly for a few minutes, and set aside to dry. The price, including formula for preparing the stock base, is 12*s.* 6*d.*

H. E. H—It is, of course, wrong that our correspondent's patients should be visited by touts working for another medical man, whether they are working directly for him or only for a medical aid association with which he is connected. But before bringing the matter to the notice of his rival's University our correspondent will be well advised to be sure, not only that he is right in suspecting that gentleman's collusion, but that he can prove it. Nothing can stop the touts of the Medical Aid Association from pressing their institution upon the notice of all. This fact constitutes in our mind one of the chief reasons why medical men should strictly decline to have any dealings with many of these clubs.

WANTED, A TRAINING INSTITUTION.

To the Editors of THE LANCET.

SIRS,—Having a patient (aged eighteen years) suffering from defective sight owing to atrophy of the optic nerve and paralysis of the left arm, and who also stammers badly, but whose general health is fairly good, I am anxious to find out if there is any home or training institution, public or private, to which his parents can send him, as he is unfit for any ordinary avocation. If you or any of your readers can give me any information on this point I shall be greatly obliged.—I am, Sirs, yours truly, ENQUIRER.

Aug. 19th, 1896.

A. R. M.—We cannot recommend an individual practitioner. Complete change of climate has been known to relieve sufferers from hay-fever, but our correspondent must not anticipate a certain cure.

ADVERTISEMENT.

THE following paragraph appears in the *Aberdeen Weekly Journal* concerning a lady practitioner in Aberdeen:—

> "Dr. ——, who has just started practice in Aberdeen as a ladies' doctor, is a native of Aberdeenshire, and a student of Edinburgh Medical College for Women, where she had a brilliant career. She subsequently went to study surgery at Glasgow, and afterwards spent some time in a Dublin Hospital in order to perfect herself in midwifery and the diseases of women. She took up house about a month ago in ——street, where she has already got a start in her profession. Dr. —— is possessed of a charming manner, and she has the good wishes of many friends for success in the work she has chosen."

Dr. —— will charm her brother and sister practitioners with her manner if she will distinctly discourage such testimonials to her merits in a lay paper.

A SATISFACTORY OIL STOVE.

To the Editors of THE LANCET.

SIRS,—As I find it necessary to warm my reception-room and surgery by means of an oil stove, could any of your numerous readers recommended one of which they have had personal experience and which has proved satisfactory in use and economical in cost?

I am, Sirs, yours truly,

Standish, Aug. 18th, 1896. M. O. H.

Etiquette.—There is no rule under the circumstances. It would be perhaps better not to make a charge.

PARIS CLINIQUES.

To the Editors of THE LANCET.

SIRS,—Can you or any of your readers give me any information on the following points: 1. What special classes or cliniques are open to qualified strangers in Paris? 2. When do they commence? 3. Where could one find the addresses of suitable lodgings in Paris? Any information on one or all of these points would be greatly esteemed by

Yours truly,

Aug. 19th, 1896. M.D.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY (29th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Pembroke County Guardian, Shrewsbury Chronicle, South Wales Daily News, Health, Somerset County Herald, Manchester Guardian, Liverpool Mercury, Sheffield Telegraph, Huddersfield Chronicle, Alnwick Gazette, Rangoon Times, Western Daily Press, Leicester Daily Mercury, Halifax Guardian, Wolverhampton Chronicle, Bradford Observer, Birmingham Gazette, Norfolk Chronicle, Citizen, Newcastle Daily Leader, Times of India, Scotsman, Brighton Gazette, Pioneer Mail, Builder, Liverpool Daily Post, Architect, Bristol Mercury, Vegetarian, Sanitary Record, Pelican, Yorkshire Post, Mining Journal, City Press, Leeds Mercury, Doncaster Chronicle, Weekly Free Press and Aberdeen Herald, Doncaster Gazette, Macclesfield Courier and Herald, Reading Mercury, Local Government Chronicle, Hertfordshire Mercury, Word and Work, Indian Daily News, Daylight, Allahabad Morning Post, Whitby Gazette, Lancashire Express, Colchester Gazette, Ayr Observer, Oswestry Advertiser, Surrey Advertiser, Local Government Journal, Rhyl Journal, Hereford Times, Loughborough Monitor, Eastbourne Gazette, Shrewsbury Chronicle, Star, People, Weekly Advertiser, Falkirk Herald, Blackpool Gazette, Cambridge Express, Dublin Evening Mail, Irish Times, Jackson's Oxford Journal, Montreal Daily Herald, Carnarvon Herald, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. C. C. Aitken, Carlisle; Mr. W. Adams, Lond.; Mr. A. Allen, Bath; Mons. F. Alcan, Paris; Messrs. T. and A. Armstrong, Lond.; Messrs. Armour and Co., Lond.; Messrs. Arnold and Sons, Lond.; Anglo-Swiss Condensed Milk Co., Lond.; Albino, Lond.; A. B. C., Gretton.

B.—Dr. W. Bruce, Dingwall, N.B.; Dr. A. M. Buchanan, Glasg.; Mr. L. A. Barrow, Lond.; Mr. Richard Barwell, Lond.; Mr. B. Birchall, Liverpool; Mr. A. S. Bostock, Chichester; Mr. Percy L. Blake, Lond.; Messrs. Blackie and Son, Lond.; Messrs. Burgoyne, Burbidges and Co., Lond.; Messrs. Burroughs, Wellcome and Co., Lond.; Messrs. Baxendale and Co., Manchester; Messrs. Blondeau et Cie., Lond.; Bootle Borough Hosp., Clerk of; *British and Colonial Druggist*, Lond., Publisher of; B. F. E., Lond.

C.—Mr. P. Carmody, Lond.; Mr. J. C. Connell, Kingston, Ontario; Mr. T. Cooke, Lond.; Miss F. Minnie Child, Birmingham; Messrs. Crossley, Moir and Co., Lond.; City of Dublin Hosp., Sec. of; Derbyshire Royal Infirmary, Sec. of; Cortland Wagon Co., Lond.

D.—Dr. T. H. Davison, Lond.; Mr. W. G. Dreaper, Ashbourne; Messrs. Down Bros., Lond.; Doncaster General Infirmary, Sec. of; Derbyshire Royal Infirmary, Sec. of.

E.—Col. Engledue, Byfleet; Electrical Standardising &c., Inst., Lond., Sec. of; *Essex County Standard*, Colchester, Publisher of.

F.—Dr. A. M. Fraser, Southsea; Dr. R. A. Fleming, Haddington; Messrs. Fannin and Co., Dublin; Finsbury Dispensary, Sec. of; Faculty of Medicine, University of Edinburgh, Dean of.

G.—Dr. W. S. A. Griffiths, Lond.; Dr. G. A. Gibson, Edin.; Mr. C. A. Griffiths, Cardiff; Mr. T. Gilcriest, Sligo; Gt. Eastern Railway Co., Continental Traffic, Manager of; *Chronicle*, Gloucester, Editor of.

H.—Dr. F. Hall-Wright, Corozal, B. Honduras; Dr. Alexander Haig, Lond.; Dr. C. F. Harford-Battersby, Lond.; Mr. A. Haviland, Farnborough; Mr. W. S. Harmer, Croydon; Mr. D. Hamilton, Aberdeen; Mr. G. E. Haslip, Lond.; Mr. M. L. Hughes, Malta; Mr. J. Heywood, Manchester; Mr. G. Hermanni, jun., Lond.; Mrs. C. Hamilton, Lond.; Mrs. D. Hanham, Woodhall Spa; Messrs. Hazell, Watson and Viney, Lond.; Messrs. Herschfeld Bros., Lond.

I.—Inga House Nurses' Cooperation, Lond., Sec. of; Institute of Chemistry of Gt. Britain and Ireland, Lond., Sec. of; Ickringills, Ltd., Keighley, Sec. of.

J.—Lieut.-Col. J. Lutheran Johnson, Malta; Mrs. F. Johnstone, Redcarr, N.B; Jeyes' Sanitary Compounds Co., Lond., Sec. of.

K.—Dr. A. A. Kanthack, Liverpool; Messrs. Keith and Co., Edin.; Messrs. Krohne and Sesemann, Lond.

L.—Dr. M. M. Larty, Pontyclun.

M.—Sir W. MacCormac, Lond.; Dr. J. Macintyre, Glasg.; Dr. J. A. Macdougall, Ellon, N.B.; Dr. D. Macartney, Glasg.; Dr. C. J. Macalister, Liverpool; Dr. Alexander Morison, Lond.; Dr. R. McNeill, Oban, N.B.; Mr. J. C. McVail, Glasg.; Dr. Leonard Molloy, Blackpool; Mr. Ernest S. Medcalf, Hove; Messrs. Moore, and Co., Lond.; Messrs. Marion and Co., Lond; Messrs. M'Caw, Stevenson and Orr, Belfast; Medical Prayer Union, Lond., Hon. Sec. of; Military Dept., India Office, Lond., Sec. of; Meath Hosp. and co. Dublin Infirmary, Dublin, Hon. Sec. of; Manchester Southern Hosp., Hon. Sec. of; M. D., Cantab.

N.—Dr. A. Nuttall, Birmingham; Dr. T. G. Nasmyth, Cupar, Fife, N.B.; Messrs. Neyroud and Son, Lond.

O.—Dr. Ogle, Lond.; Surg.-Capt. C. P. Oliver, Maidstone; *Optician*, Lond., Editor of.

P.—Mr. Y. J. Pentland, Edin.

R.—Dr. G. A. Reid, Southsea; Dr. J. Radzinovski, St. Petersburg; Dr. C. H. Roberts, Lond.; Mr. A. C. Roper, Exeter; Mr. William B. Rotheroe, Lond.; Mr R. Ruttle, Burnley; Messrs. Reid and Donald, Perth; Messrs. Robertson and Scott, Edin; Royal Medical Benevolent College, Lond., Sec. of.

S.—Dr. G. E. Shuttleworth, Richmond; Dr. W. K. Sibley, Lond.; Dr. E. M. Sympson, Lincoln; Dr. Sonsino, Bagni di Lucca; Mr. Fred J. Smith, Lond.; Mr. Stewart Stirling, Edin.; Mr. A. Stenhouse, Glasg.; Mr. W. J. Spradley, Lond.; Mr. G. Slater, Sheffield; Mrs. J. Shawe, Scarborough; Miss G. Sweeting, Lond.; Messrs. W. H. Smith and Son, Birmingham; Messrs. Southall Bros. and Barclay, Birmingham; Messrs. G. Street and Co., Lond.; St. Mungo's College, Glasg., Sec. of; St. Bartholomew's Hosp., Lond., Warden of.

T.—Dr. G. Templeton, Lond.; Dr. George Thin, Lond; Rev. A. Tooth, Croydon; Mr. Herbert Tilley, Lond.; Mr. W. R. Tuck, Truro.

U.—University College, Dundee, Sec. of.

V.—Vidua, Lond.; Vertex, Lond.

W.—Dr. D. Wallace, Edin; Dr. Wm. Wallace, Lond.; Dr. J. H. Wilson, Standish; Dr. Samuel West, Lond.; Dr. F. Willcocks, Lond; Mr. F. W. Wright, S. Godstone; Messrs. Wright and Co., Bristol; War Office, Army Medical Dept., Lond., Director General of.

Y.—Mr. A. B. Youngman, Layer Marney.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. F. H. Alderson, Lond.; Mr. R. R. Anderson, Fern Hill; Mrs. Agar, Highworth; Apothecaries' Hall, Dublin, Sec. of; A., Lond.; Alpha, Bury St. Edmunds, A. B., Lond.; Arithmos, Lond.

B.—Dr. W. A. Black, Lond.; Dr. G. Burgess, Gt. Driffield; Mr. W. H. Boger, Fowey; Mr. C. J. Bond, Leicester; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. J. Bolding and Sons, Lond.; Messrs. Banner and Gray, Liverpool; Belgrave Hosp. for Children, Lond., House Surg. of; Beta, Lond; Beth, Lond.; Bay, Lond.; B. P., Lond.

C.—Dr. J. Chiene, Edin.; Dr. Clarke, Inverness; Mr. H. A. Cruttwell, Hallaton; Mr. R. J. Colenso, Lond.; Mr. F. W. Chapman, Chesterton; Mr. R. Cuffe, Woodhall Spa; Mr. G. W. Champness, Rochdale; Messrs. J. W. Cooke and Co., Lond.; Messrs. S. Clark and Co., Lond.; City of Dublin Hosp., Sec. of; Central Lond. Ophthalmic Hosp., Sec. of; Central, Lond.; Careful, Lond.

D.—Dr. E. Doyle, Leigh, Lancs.; Mr. J. Dean, Llantyllin; Mr. A. B. Duprey, Port of Spain, Trinidad; Messrs. Dickeson and Stewart, Lond.; Messrs. A. De St. Dalmas and Co., Leicester; Domus, Lond.

E.—Mr. H. Elliott, Erdington; Edin., Lond.

F.—Fides, Lond.

G.—Dr. W. T. Gairdner, St. Andrews; Mr. J. H. Gough, Mannamead; Mr. T. W. H. Garstang, Knutsford; Gamma, Lond.

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J.—Mr. E. James Gibbs, Banbury.

K.—Dr. C. F. Knight, Portobello; Mr. W. A. Keates, Bath.

L.—Dr. W. A. E. Leary, Castlederg; Dr. H. A. Logan, Baliyclare; Mr. R. H. Lucas, Bury St. Edmunds; Mr. W. Land, Wakefield; London Temperance Hosp., Sec. of; L. M., Lond.

M.—Dr. J. D. Miller, Toleross; Dr. J. McNaught, Waterfoot; Mr. H. Marmion, Isleworth; Mr. A. C. Morton, Aylsham; Mr. J. E. H. Mitchell, Lond; Miss L. Mowat, Glasg.; Messrs. Macduff and Co., Lond.; Manchester Clinical Hosp. for Women, Sec. of; Medicus, Worthing; M.R.C.S.E., London; Million, Lond.; Mot, Lond.; Medicus, Newcastle-on-Tyne; M.D., Whitby; Medicus, Lond.; Dr. M. F. C., Belfast; M.B., C.M., Lond.

N.—Northumberland, Durham and Newcastle Infirmary for Diseases of the Eye, Newcastle-on-Tyne, Sec. of; Nurses Cooperation, Lond., Lady Supt. of; National Registration of Plumbers, Plymouth, Hon. Sec. of.

O.—Dr. A. B. C. Orchard, Billesdon; Mr. J. E. S. Old, Carlton; Opportunity, Lond.

P.—Dr. W. H. Peake, Shenley; Dr. J. M. Pardy, Launceston, Tasmania; Mr. W. G. Pritchard, Carnarvon; Mr. W. Potter, Liverpool; Mr. E. W. Paul, Cowes; Mr. R. Purves, S. Shields; P. W., Lond.; Pax, Lond.

Q.—Quick, Lond.

R.—Miss J. Rutt, Canterbury; Royal Cornwall Infirmary, Truro, Matron of; R. M., Lond.; R. E., Lond.; Rusticus, Lond.

S.—Dr. H. Snow, Lond; Rev. C. H. Stewart, New Brighton; Mr. Sweeting, Lond.; Messrs. A. Scott and Son, Bath; Sanitary Institute (Parkes Museum), Lond., Sec. of; South Devon and East Cornwall Hosp., Plymouth, House Steward of; Scapula, Lond.; Statim, Lond; Spence, Lond.; Spero, Lond.; Surgery, Lond.; S. T., Lond; Scribe, Lond.

T.—Dr. E. F. Trevelyan, Leeds; Mr. J. A. Thomas, Edin.; Mr. J. Thin, Edin; Mr. J. A. Thornhill, Burton-on-Trent; Mr. R. Turner, Turriff; Mr. B. Thornton, Margate; Mrs. Theobald, Leicester; Messrs. W. E. Thorpe and Co., Folkestone; Tamar Indien Grillon, Lond.; Thistle, Lond.; Tabloid, Lond.

V.—Victoria Hosp., Burnley, Hon. Sec. of; Volens, Lond.

W.—Dr. G. J. Wilson, Oxford; Dr. G. H. Wilson, Foyers; Mr. D. O. Williams, Glandovey; Mr. W. Watkins, Llangattock; Mr. C. E. Winckworth, Shefford; Mr. C. Williams, Plymouth; Messrs. Wilcox and Co., Lond.; Weston-super-Mare Hosp., Sec. of; West Ham Hosp., Sec. of; West Riding, Lond.; W. S. M., Lond.; W. H., Lond.

X.—X., Lond.; X. Y., Lond.

Z.—Z., Lond.; Zeta, Lond.; Ziba, Lond.

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Official and General announcements Ditto	0	5 0
Trade and Miscellaneous Advertisements Ditto	0	4 6
Every additional Line	0	0 6
First Page (under Contents) when space available		
(Books only) ... ... Five Lines and under	0	5 0
Every additional Line	0	1 0
Quarter Page	1	10 0
Half a Page	2	15 0
An Entire Page	5	5 0

Terms for Position Pages and Serial Insertions on application.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to fictitious names or initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière Asnières, Paris.